NEW YORK SHELL CLUB INC.

FOUNDED JAN. 1949

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Full Family Membership $15.00 per year
Corresponding Membership $10.00 per year
Foreign Membership $12.00 per year, paid in U.S. currency

The Treasurer-Membership officer should be notified promptly of any change of address.

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SCHEDULE OF MEETINGS

PLEASE NOTE: There may be changes in dates and/or places for meetings from those listed below. Please consult your current issue of NYSC NOTES for any changes. The April meeting, our annual Social/Auction, will not be held at the Museum.

1998 - 1999

Saturday, October 10, 1998
Saturday, November 7, 1998
Sunday, December 13, 1998
Sunday, January 10, 1999
February 14, 1999
March 14, 1999
April 11, 1999
May 9, 1999
June 13, 1999

With the exception of this year's October, November and April meetings, our meetings are held at the American Museum of Natural History, Central Park West at 79 Street, New York City, starting at 2 PM. Visitors are always welcome.

On our meeting days, you may gain admission to the Museum without paying the Museum's admission fee by presenting your NEW YORK SHELL CLUB membership card.

Most of our meetings at the Museum will probably be in the Blum Classroom on the 1st floor near the 77th Street Museum entrance. This year our October and November meetings are field trips, and our April, 1999 meeting will be our annual Auction and Social, which is not held at the Museum.

NOTE: NEW YORK SHELL CLUB pins are available;
$3.50 at a meeting
$4.00 for mail order

The NEW YORK SHELL CLUB meets usually on the second Sunday of the month from October to June. Winter and Spring meetings are usually at the Smerican Museum of Natural History, New York City. On meeting days, your NYSC membership card will provide admission to the Museum without payment of the Museum's admission fee.

Information on field trips or changes in meeting dates will be provided as required.

PROGRAM SCHEDULE

Sunday, June 13, 1999 2:00 PM

American Museum of
Natural History
Edith C. Blum
Classroom

FALL MEETINGS

Sunday, September 12, 1999

SHELLING IN THE SEYECHELLES ISLES, INDIAN OCEAN

Sunday, October 10, 1999

SHELL JAZZ ON A SUNDAY AFTERNOON

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HIGHLIGHTS OF RECENT MEETINGS

JANUARY 10: President Carl Ehrlich said that we must be giving thought to finding candidates for the offices of treasurer and corresponding secretary and the job of typing SHELL NOTES. Theta Lourbacos has been handling all of these responsibilities. Charles Whitman volunteered to serve as temporary treasurer.

Romuald Czepulkowski passed around the first live-taken specimen of Turris ambages Barnard 1958. It is from Transkei, South Africa. Carl had brought a display of Conus generalis.

The speaker was Steve Rosenthal, who reported on a hurried collection trip to Singapore and the Philippines. It was made possible because his employer, Pfizer, Inc., had sent him to Singapore for a four-day training session. He managed to work in some snorkeling in Singapore, which netted both live and beach material, and a stay of less than 48 hours in Cebu, P.I. Here, the immediate attention of a contingent of eager shell dealers indicated that he had become a VIP on a highly effective grapevine. Among the goodies he relieved them of were Cypraea leucodon and C. guttata. Demonstrating the range of his interest, he collected one terrestrial snail in a damp woodland.

The door prizes were Conus betulinus, won by Carl; Cassis strigata, won by Marion Sullivan, and Venus purpura, won by Juan Rivera.

FEBRUARY 14: Attention was drawn to a letter from a woman in Connecticut who listed the shells in a collection that she would like to sell.

Nick Katsaras read a valentine that he will send to a woman in Florida, in which he included the news that he had recently been hit by a truck. Fortunately, the truck had just started away from the curb, and was moving slowly. The damage to Nick was limited to bruises, scrapes and cuts. He did not mention possible damage to the truck.

(Nick joined New York Shell Club in November, 1949;
he was voted HONORARY LIFE MEMBER in 1989.)

The door prizes were Pleuroploca trapezium, won by Marion Sullivan; Pitar lupanaria, won by Milton Werner, and Macrocallista maculata, won by Richard Kelly.

The program for the day was a swap session which was busy, protracted and enriching to the collections of the swappers. Carl made the proceedings doubly rewarding by laying out a large selection of specimens from his collection for acquisition by anyone interested in collection enhancement for free.

MARCH 14: Romuald Czepulkowski displayed a specimen of Cerithium amirantium, a rare shell from the Philippines.

The speaker was Mel Springer, who with Sylvia's assistance described and depicted a recent shelling trip to the Cook Islands. Their flight terminated on Raritonga, where the 16 or so inhabitants speak English, and offer simple but good hotel accommodation.

Here a reef protects the lagoon from sharks, and at low tide one can walk to the reef. While collecting in lagoon and reef, Mel took some photos underwater of fish and shells. He added some later close-ups of part of his haul--Conus, Sinum, Harpa and others. At a flea market they picked up some Oliva and Calliostoma. On Aitutaki Island there are no cars, but there are motorbikes. They might have gone through Customs, but the Customs house, duly photographed, was empty. Motel rooms here are bungalows.

At Akitua Island the shelling was good, and notable for Strombus. A marine research station here maintains a Tridacna farm, where Mel photographed stages of growth. Selling of Tridacna is banned in the Cook Islands. The station also farms Pinctada, but has had no luck with earls. The Springers also shelled, with great success, off some uninhabited islands, taking underwater pictures along the way. Mel described the area as "cone heaven." A memorable meal was fresh-caught tuna, grilled by their boatman.

The door prizes were Voluta swainsoni, won by Marion Sullivan; Terebra triserriata, won by Ed Cowles; two muricids and a cerith won by Al Scarpetti; Vasumhorridum, won by Henry Gordon, and Chiton tuberculatus, won by Milton Werner.

APRIL 11: The program of the 470th meeting of the NEW YORK SHELL CLUB was the annual auction, held at Dorothy Jensen's Broadway Dance Studio in Astoria, Queens. Attendance was 23.

Auctioneer Mel Springer was assisted by Romuald Czepulkowski and Carl Ehrlich. Sylvia Springer served as teller. The doors opened at 11 a.m. and Mel started the bidding on the first of over 140 shells and related items at 1 p.m.

The most notable of the shells that changed hands were:

Conus nobilis victor, light color variety, 49 mm. - $140
" " " dark " " 46 mm. - $90
Conus wittigi $120
Sphaerospira fraseri - $85
Morum dennisoni - $85
Voluta kurodai - $50

Turbo marmoratus - $42
Cypraea coronatus - $40
32 Mitridae & Cancellariidae, Solomon Isls. - $39
Conus mindanus agassizi - $35

An autographed copy of "Compendium of Seashells" drew $40. Cecelia Abbott contributed a New York Shell Club 25th anniversary medallion that had been Tucker's. It brought $30.

The sale table, bargain table and book table did brisk business. Coffee, wine, punch and snacks were supplemented with pizza provided by Carl Ehrlich.

MAY 9: Carl Ehrlich had on display specimens of Conus kinoshitai and Conus witigi, demonstrating color variation within the species.

The speaker was Jay Cordiero, Collection manager for invertebrates of the American Museum. With slides and narration he reported on a freshwater collecting trip for the Museum in June, 1998. The 30-day trip was made in the company of about a dozen others from the Museum and Cornell University. The localle was the Central African Republic's rain forest, and the purpose was to add to the collections of the department and to train local people in methods of collecting and preserving specimens, and in conservation.

Jay concentrated on river mussels. Many species in this area have not yet been described. His work was made difficult by forests that grow right to the water's edge. His collecting gear included a machete used to cut paths, a rake with a wire basket attached and glass-bottomed viewing box. A water sampling tube was rigged to be closed at desired depth with string and elastic bands. The end seals were wiffle balls.

Jay also collected leeches and fingernail clams. A tiny mussel may be a new species. His photos also included other flora and fauna and scenery. He brought along for viewing alcohol specimens of Achatina schwinfurthi and A. balata and others, and a number of shells.

The door prizes were Conus capitanus, won by Milton Werner; Phenacovolva sowerbyana, won by Juan Rivera, and Conus adversarius (a fossil), won by Irv Hoppenwasser.

COMING ATTRACTIONS

SEPTEMBER 12: SHELLING IN THE SEYECHELLES ISLES, INDIAN OCEAN

OCTOBER 10: SHELL JAZZ ON A SUNDAY AFTERNOON

THINK TANK

THE URCHIN: NO CHICKEN OF THE SEA BUT SURELY DESERVING OF PRAISE

THE NEW YORK TIMES, March 20, 1999, page B9

> To Martin Wells, the grandson of H.G. Wells and a retired zoologist, dolphins are overrated and whales are not quite as smart as they are cracked up to be. Mr. Wells, you see, champions cephalods, those marine mollusks with varying numbers of arms, suckers and fin-bearing mantle. Here are excerpts from his book "CIVILIZATION AND THE LIMPET" (Perseus Books, 1998).

If one ever had to vote for the world's most unloved animal, the sea urchin would undoubtedly figure in the short list of most people who have met one personally.

Sea urchins have an uncanny knack of choosing to roost in exactly the place you need to put a hand or foot when clambering in or out of the water. The spines penetrate with the greatest of ease and are then almost impossible to remove, so that for the rest of the holiday you limp about, cannot sit down and embrace your friends with a caution that can all too readily be interpreted as a lack of enthusiasm. Along the southern coasts of Europe, the sea urchin has probably spoiled more potential romances than brewer's droop.

To understand, philosophers tell us, quite untruly is to forgive. But try, for once. What is an honest hard-working little animal to do if the nature of its business is to browse on exposed surfaces, surrounded by pirates determined to nibble off anything painstakingly converted from algal scum into something worth eating? The poor creature is a sort of marine hedgehog, eating things nobody else cares to scabente, and it is spiny for precisely the same reasons. It moves only slowly, it has no other defense and its spines are a measure of the uncharitability of the world it lives in.

Until man came along it worked well enough. Other animals observed and left well alone. But man doesn't look where he is going and just as his terrestrial counterpart was never evolved to cope with the motorcar, so the unfortunate sea urchin was totally unprepared for the onset of an insanity that has, within the last two or three generations, compelled myriads of mankind to plunge like lemmings into an environment to which they are manifestly unsuited...

An intriguing problem with the starfish, and indeed with the sea urchin as soon as it starts to move about, is how the activity of several hundred tube feet can possibly be coordinated, for the animals have no detectable brain. There is a network of nerve cells, and this is more or less concentrated along the underside of the five radii that define the symmetry of the urchin (easy enough to see if you happen on a dead one where the spines have fallen off but not immediately obvious in the living creature unless you happen to notice that the tube feet come in rows). The five radii converge on a ring of nervous tissue around the mouth on the under side of the animal. But that is all. No ganglia, no central control point as we are used to find with more orthodox animals. So how is coordination achieved? How does a sea urchin decide which way to go off for a browse today, let alone find its way home afterwards, or a starfish achieve the integrated activity that will allow it to sense, seek out, dig out and disembowel a bivalve buried in the sand?

Even a microscopic examination fails to reveal anything remotely resembling a brain or even an unusually concentrated section of the nerve cords running around the mouth and down the arms. Oppure si muove. We are baffled by animals that are built like this. Trying to analyze what goes on by recording from the nerves--technically difficult because the individual nerves are so small--we bog down in a maze of reflex pathways. We are used to thinking that any sort of organization inevitably means a chain of command, a hierarchy, yet this army appears to progress by a sort of consensus, any decision is a statistical event. Perhaps we should pay more attention. A sea urchin or a starfish is a democracy (the older textbooks talk of a "republic of reflexes") and it works. The system has a splendid ability to survive wounding on a scale that would obliterate any other moving animal. Break up a starfish as the oystermen used to do before they learned better, and the individual arms will crawl away; any bit of the nervous system will serve to run the show for the time being; in a little while tiny arms will regenerate from the stump and the starfish, now multiplied by the number of bits, is back in business. Maoist animals, as indestructible as China, starfish and sea urchins are very common creatures and have been doing very nicely since long before the dinosaurs and certainly for millions of years before the newfangled mammals began to gather illusions about which of us is actually running this planet.

TRACKING THE TREASURES, TOYS AND TRASH THAT WASH UP ON THE NATION'S SHORES

by Karen Westerberg Reyes

(from NATIONAL WILDLIFE, June, July, 1999)

The oceanographer warns beachcombers to be careful about what they pick up along the shore. "Some of the stuff is extremely dangerous," he says. Not long ago, Ebbesmeyer found a small blue bottle with Russian writing on it on a beach in Washington. "It said, 'Russian Chemical Manufacturing Industry,' and the contents turned out to be highly toxic. Who knows how many of those little vials are still out there floating?"

DEATH IN THE GULF OF MEXICO

With dead creatures at its bottom and survivors fleeing its edges, an annual dead zone spooks fishermen and challenges scientists.

By Joby Warrick

(from NATIONAL WILDLIFE, June, July, 1999)

...JUST SOUTH of Whiskey Pass, where the last of Louisiana's barrier islands gives way to open sea...the water looks as blue as ever, but beneath the boat an ocean of life quietly fades to black...In the space of a few dozen yards, one of America's most productive fisheries becomes startlingly devoid of fish below the upper water layers. Shrimp disappear, too, and so do crabs and anything else that swims. A wall of dead water spreads westward across the floor of the Gulf of Mexico, beginning at this point near the Mississippi Delta, stretching as far as the Texas border and reaching up the water column toward the boats on the surface... The emptiness of the water clearly rattles Foret, a fishing-boat pilot and shrimper's son. "You can almost feel it when you're in it," he says of the gulf's dead zone. "There are no fish here. None. Drop a line in the water and your bait rots on the line." ...Before the 1980's, small parches of lifeless water occasionally would turn up like a summer rash near the shoreline, where pollution and fertilizers from the Mississippi River promoted a toxic stew in the gulf's warm, slow-moving currents. It's the same pattern that occurs nearly every year in parts of the Chesapeake Bay, Pamlico Sound in North Carolina and other spots where pollution from rivers mingles with brackish water..."It moves around. It shrinks and expands."...Charter-boat skipper Foret suspects a connection between the dead zone and the loss of Louisiana's tidal wetlands, which are disappearing at the astonishing rate of 30 square miles a year due to erosion and channelization of the Mississippi.

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1999 - 2000

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May 14, 2000
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With the exception of this year's November meeting and our annual Auction and Social in April, 2000, our meetings are held at the American Museum of Natural History, Central Park West at 79 Street, New York City, starting at 2 PM. Visitors are always welcome.

On our meeting days, you may gain admission to the Museum without paying the Museum's admission fee by presenting your NEW YORK SHELL CLUB membership card.

Saturday, November 13, 1999
bus trip to Philadelphia Shell Show

Sunday, April 13, 2000
NYSC Annual Auction and Social

Our meetings at the Museum will be in the Edith C. Blum Classroom on the first floor near the 77th Street Museum entrance.

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Sunday, October 10, 1999 2:00 PM SHELL JAZZ ON A SUNDAY AFTERNOON	"
Saturday, November 13, 1999 PHILADELPHIA SHELL SHOW	Field Trip

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HIGHLIGHTS OF JUNE, 1999 MEETING

JUNE 13: President Carl Ehrlich had on display a number of muricids of several species that he had collected in Panama.

The speaker was Gary Rosenberg of the Philadelphia Academy of Natural Sciences. His talk, "In Praise of Molluscs," was based on his article in the June, 1998 issue of American Conchologist. He described how the molluscan shell, stable and durable, has provided valuable information not only to malacologists but to climatologists, ecologists, archeologists and other investigators. The fishing industry has derived useful informayion from the age of molluscs as shown by the growth rings in shells. Compared with the fossil records of other phyla, that of molluscs is especially rich and revealing.

The slate of candidates presented by the Nominating Committee consisted of the incumbent officers and directors. There being no nominations from the floor, the secretary was empowered to cast one vote for the entire slate.

It was announced that transportation to the Philadelphia Shell Show would be by private car, rather than by bus.

The door prizes were Tibia brevirostris, won by Amanda Rosenberg, and Lyria mitraformis, won by Milton Werner.

(The editor apologizes for having mishandled the)
(following notice, and for the long delay in its)
(appearance.))

DOROTHY GERMER

Word has come from John Germer to inform his and Dorothy's friends in the NYSC of her death in their home in Beverly Hills, Florida. The cause was heart problems that had worsened over several years.

Both were very active members of the Club for many years, and left behind many friends when they moved from the New York area, first to Ohio. Dorothy served as corresponding secretary of the Club, was a member of other shell clubs, and was a founder of the New Jersey Shell Club. She is warmly remembered in the Department of Invertebrates of the American Museum of Natural History as a long-time volunteer worker. She also had an appreciation for pipe organs and was a member of three societies of organ aficienados. Her affection for a pet led her to the North Jersey German Shepherd Club.

All of us who remember the Germers extend our sympathy to John.

(NOTE: The Germers have been NYSC members since 1961)

1999 FALL SHELL SHOWS AND MEETINGS

(Source: Donald Dan, COA Award Chairman)

Sept. 18-19 Central Florida Shell Show
Central Florida Fairground, Orlando, Florida
Jake Dominay, 700 Tam O'Shanter Drive
Orland, FL 32803 (407) 894-3033

Sept. 18-19 International Shells & Fossils Bourse,Ottmarsheim,
Salle Polyvalente, Rue de la Priscine France
Michel Rioual, 2 Rue des Vergers
68490 Ottmarsheim, France (3) 89-26-16-43

Oct. 1-3 Annual German Shell Fair, Vienna Austria
Wolfgang Fischer, Matinigasse 26
A-1220 Vienna, Austria 43 (1)47654-3302
FAX-3342

Oct. 30
Oct. 30 British Shell Collectors' Club Shell Show
Napier Hall, Hide Place & Vincent St., London, England
Kevin Brown, 12 Grainger Road
Isleworth, Middlesex TW7 6PQ, England 44(181)568-8333

Nov. 7 - 8 Philadelphia Shell Show, Philadelphia Acad.Nat Sciences
Franklin Parkway & 19th Street, Philadelphia, PA.
Al Schilling, 419 Linden Ave.
Glenside, PA 19038 (215) 886-5807

PURPLE SNAILS

by Peggy Williams

(Originally from Sarasota Shell Club News, January, 1998)

Imagine walking along the beach in Key West and suddenly finding a sea full of violet covered shells floating on the tide and literally turning the sand purple. This happened to a pioneer shell collector, Charles T. Simpson, in 1883. Of course, Key West wasn't as large as it is today and there wasn't any competition on the beach. He was able to fill his handkerchief, hat and pockets with literally thousands of shells (he had 2000 perfect specimens when he got back to the ship) that had come to the beach overnight. (However, the animals still in the shells secreted a purple due and he had to throw away his clothing!)

Where did they come from?
This family of shell, the Janthinidae, are pelagic, which means they live their entire life floating in deep ocean waters far from land. The raft of shells must have grazed the beach at Key West that night, stranding all those animals. The mass of shells might have been as large as 200 nautical miles in length, as one colony has been reported

How do they do it?
The Janthinas (sometimes spelled Ianthina and sometimes pronounced "yanthina") build themselves a raft of bubbles by capturing air from the surface of the water with their foot. Mucus forms a bubfle and a mass of bubbles provides enough lift to keep the shell on the surface of the water. If the raft is broken up, the shell sinks and the animal dies.

What do they eat out there in the ocean?
Floating around on the open ocean, the animal looks for food in the shape of jellyfish prey. But not just any jellyfish--they relish the Physalis, or Portuguese Man-of-War, which is deadly to touch, the Porita, or Blue Button, which has a chitinous disk with the texture and buoyancy of Styrofoam to help it float, and the Velella, or By-the-Wind-Sailor, which has a floating "sail" allowing it to tack with the wind. A pair of snails can consume a 4-inch Man-of-War in less than a day. They will eat other organisms, and in a pinch, each other. Janthinas are blind, and apparently locate their prey by scent.

All of these prey animals are also purple, Why?
They live in the deep blue sea, and the dark purple color is cryptic in that environment, making them difficult for birds to find. But the largest shell, Janthina janthina, is two-toned. The spire of the shell is light lavendar, while the lower half is deep purple. The animal lives upside-down on the bubble raft, with dark color uppermost and the pale spire cryptic against the sun-brightened surface to a fish predator below looking upward. Beside the fish and birds, Janthina are also in danger of being consumed by other mollusks, nudibranchs that live in rafts of floating wood or Sargasso weed. The purple "dye" that Janthina secretes is probably foul-tasting and serves to discourage predators.

How do they get together to make more Janthinas?
The technical terminology for their mating system is "Protandric hermaphrodism." This means they are born as males and develop later into females. Fertilization is internal, but the male lacks a penis, so instead of directly mating, the male releases sperm in a large, feathery, mobile carrier that wiggles its way through the water in search of a snail in female stage. Some of the members of the group then lay their eggs under bubble rafts, though the most common one, Janthina janthina, broods its eggs inside its its body until tiny shells emerge and make their own rafts.

Where can I find Janthinas?
There are 7 or 8 species worldwide, but the largest and most common is Janthina janthina, which ranges all around the globe in the Temperate Zone. To find some you could look on beaches around the world where currents like the Gulf Stream might carry them. You might find them on the Atlantic Coast as far north as Massachusetts but most are in southeast Florida and the Keys. You might even find them in the Gulf of Mexico or as far afield as Australia.

DANGEROUS LAND SNAILS

(Mariah Lawson)

(from THE-SHELL-O-GRAM, Volume 39(5)

Having grown up in Florida and done much camping, hiking, etc., I thought I had had my share of chiggers, just like everyone else, but it was my shell collecting by mail that brought me the worst case I've ever had!

About two years ago, I received a parcel of quite beautiful land and tree snails from a friend in Indonesia, and I opened them and played in them like a child on Christmas morning, as I do with each new arrival. About two hours later, I began itching all over, then burning, and by that night, I thought I'd prefer to be flayed than stay inside my skin!

By the next day, the overall fiery redness had concentrated into about 300 (No exaggeration!) lumps, which were swollen and painful and itched with a fury I'd never encountered with domestic chiggers!

I tried bleach, Lanacaine, poison ivy lotion, alcohol, toothpaste, fingernail polish, etc. Nothing worked! The bites and/or imbedded critters lasted about two weeks, and left scars which have finally faded after the two years.

I never saw any critters at all; they must have been almost, if not, microscopic. What I do know is that they were hungry! I guess that they were inside one of the shells found somewhere in the jungle, and that over the months it took the box to arrive here ran out of food, and I was the first thing they had found. Whatever they were, I hope I never find myself in the presence of them or their kin again!

ON COMMON NAMES

(Paul Monfils)

There are a few things we should keep in mind about common names. First, an overwhelming majority of the known molluscan species do not have any common name at all. It is primarily the better known species in the better known families that have been given common names.

Practically all the cowries (family Cypraeidae) have generally accepted common names (at least in English). Probably only 1/2 to 2/3 of the cones (family Conidae) do, and practically none of the hundreds of described turrids (family Turridae) have common names.

The Compendium of Seashells lists an English name for every one of the 4,400 or so species pictured, which could lead a novice collector to expect that every species has a generally accepted common English name. But frankly, many of the common names listed in the Compendium were not in general usage, or did not exist at all, before publication of the book, and many of them are still not in general usage today.

CARBON DIOXIDE BUILDUP HARMS CORAL REEFS

SCIENCE NEWS, VOLUME 155, p. 214

The accumulation of carbon dioxide gas in the atmosphere is stunting the growth of coral reefs and represents a significant new threat to reef health, reports an international team of researchers.

"We haven't really considered this before, and it appears that it is a potential problem" says biologist Joan A. Kleypas of the National Center for Atmospheric Research in Boulder, Colo.

Recent experiments conducted in French aquariums and in the Biosphere 2 facility in Arizona alerted Kleypas and her colleagues to the dangers of carbon dioxide. In these controlled situations, scientists found that adding extra carbon dioxide to water slowed the rate at which coral and reef-building algae secrete the mineral calcium carbonate--the skeleton of reefs.

"We have very limited information, but all the information is pointing in the same direction," says Jean-Pierre Gattuso of the National Center for Scientific Research in Villefranche-sur-mer, France, who conducted some of the experiments. Kleypas, Gattuso, and their colleagues calculate the potential effects of carbon dioxide on reeds in the April 2 SCIENCE.

The news will come as a surprise to many biologists because they have largely ignored how reed organisms respond to carbon dioxide changes, says coauthor Robert W. Buddemeier, a geochemist at the University of Kansas in Lawrence.

As carbon dioxide pollution accumulates in the atmosphere, it seeps into the upper ocean and reacts with water. These reactions increase the concentration of bicarbonate ions (HCO_3) and decrease the concentration of carbonate ions (CO_3). Coral, clams, and many other organisms build their shells by bringing carbonate ions together with calcium to form three different calcium carbonates.

Coral and a group of organisms known as calcifying algae require a higher concentration of carbonate ion and hence are more vulnerable to the extra carbon dioxide than are clams, say the researchers.

Since the beginning of the Industrial Revolution, carbon dioxide amounts in the atmosphere have risen from 280 to 365 parts per million. This has caused a 6 to 11 percent decline in calcium carbonate formation by coral and calcifying algae, calculate the authors. This rate of growth, they project, will drop another 8 to 17 percent by the time carbon dioxide amounts double, expected midway through the next century.

The change will not kill coral, but it will slow its growth and weaken reefs. "The coral is likely to be more fragile, more susceptible to storm damage, erosion and breakage," says Kleypas.

Stephen V. Smith of the University of Hawaii at Manoa says that "from the point of view of coral reef communities, this potentially is an extremely important consideration."

The experiments conducted thus far, however, have only examined a small number of species over short periods. Researchers need to test other species, he says, and also determine whether coral and calcifying algae eventually adapt to the extra carbon dioxide.

Coral reefs are already under siege from a vast assortment of threats, ranging from pollution to the recent problems of bleaching linked to excessive ocean temperatures (SN: 6/15/96, p. 379). The burden of additional carbon dioxide is adding another significant source of stress, says Kleypas.

Given all the problems, Buddemeier sees a bleak future for coral reefs: "A lot of the pretty reefs that people like to look at and fish in and that provide breakwaters are not going to be with us for a whole lot longer". --R. Monastersky

TRACKING THE TREASURES, TOYS AND TRASH THAT WASH UP ON THE NATION'S SHORES

by KAREN WESTERBERG REYES

from NATIONAL WILDLIFE, June/July 1999, p. 74

Kurt Ebbesmeyer, a self-employed oceanographer, explores the ebbs and flows of the ocean, discovering the world of trash, treasures and trifles that either fall off ships or are thrown overboard and end up floating--sometimes for years. He warns beachcombers to be careful what they pick up along a shore, "Some of the stuff is extremely dangerous." A small blue bottle with Russian writing on it from a beach in Washington contained highly toxic material.

PRESERVING MOLLUSKS

Adapted from THE CAPSULE, Vol. 30 No. 4
newsletter, Astronaut Trail Shell Club

The best desiccation technique for preserving microshells is the use of isopropanol or ethanol; alcoholic beverages can be used, but not denatured alcohols; the fluid should be changed a few times. Hydrogen peroxide is an oxidant and may be used to destroy odoriferous compounds, but not as a desiccant. Soaking should be no more than a few hours and the shell thoroughly rinsed afterwards. Hydrogen peroxide is a deodorizer and can also dissolve some of the soft tissue, making it easier to flush out microshells.

THE URBAN DEEP

Richard Weir

from THE NEW YORK TIMES, Sec. 14
August 29, 1999

After Ambrose Afondur took diving lessons in the Y.M.C.A. pool in New York City, he went diving in Hawaii, the Caribbean Sea, the Maldives (Indian Ocean), and the Red Sea. This year he had his first New York dive, the Long Island Sound above the wreck of the Maine, a steamship that sank in 1920 after hitting an ice floe. He declares this dive eclipsed the ones he had done in the Red Sea and the Caribbean.

With their underwater flashlights, the ship's metal hull had turned into an artificial reef, its nooks and hollows teeming with scurrying lobsters, dozing blackfish, nosy porgies and fluke, some of them nearly the size of garbage-can lids.

This area, the Sound, the Hudson and East Rivers and the Atlantic Ocean, offers only about 10 feet of visibility on a good day, can provide an unexpectedly rich pageant of marine life and an opportunity to explore shipwrecks.

Two submerged pipes bring water into the Aquarium's tanks and extend offshore for about 250 yards. Although one would expect to see encrusted pipes, mussels and orange sponges attracting a diversity of creatures abound, including native sea horses and brightly colored tropical fish like French angelfish, spot-fin butterfly fish and Caribbean jacks. They drift up the Gulf Stream as eggs or young fish and get washed close to shore by storms or eddies. For those who come from Florida, it's a one-way trip. By November, when New York water temperatures drop below 60 degrees, the fish perish.

Almost Paradise, a beach on the edge of Far Rockaway, Queens, is near East Rockaway Inlet and about a mile from the Atlantic Ocean. Marine life is bountiful; divers have reported seeing Caribbean creatures like groupers, squirrelfish, cornet fish and trumpet fish. There are yellow sponges, soft North Atlantic coral, sea anemones and a range of indigenous fishes from bluefish to sand sharks.

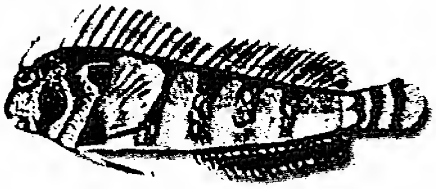
In the holes of a broken clay flower pot, a pair of blennies were residing, small brownish fish with bulbous eyes and antlerlike cirri, or tabs, coming out from their heads.

MARINE LIFE

What's Swimming By?

Some of the creatures found in city waters:

INDIGENOUS



Feather Blenny This stubby 4-inch fish, found on oyster reefs and near rocky shores, has cirri, or tabs, on its head that resemble antlers.

American lobster Bountiful in the crannies of wrecks and reefs, it can put up a good chase. Divers with noncommercial state permits may bag six a day, subject to size and other restrictions. Lobsters weighing as much as 24 pounds have been yanked from wrecks.

Tautog (or blackfish) Olive or dark gray in color, they can measure up to 3 feet long and can weigh as much as 22 pounds. They feed on shellfish and crustaceans, and live in rocky areas and around wrecks, breakwaters and pilings. Some divers catch them with spears.

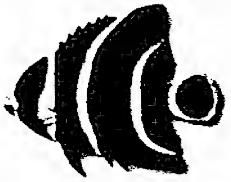
Northern sea robin A bottom dweller, about 15 inches long with a bony head, it has a set of smaller pectoral fins used for probing for food and a larger, winglike set used in underwater gliding.

Lined seahorse Olive brown, orange or yellow in color and about 6 inches long. Its original Latin name was Hippocampus hudsonius because it was associated with the Hudson River. Now called Hippocampus erectus it can be found from Nova Scotia to Argentina.

Little skate Similar to larger manta or sting rays, this bottom-dwelling flat creature has a long, thick tail and can grow to 21 inches.

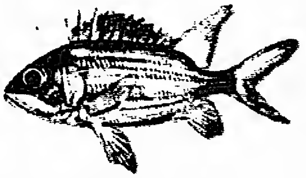
TROPICAL

French angelfish Black with yellow bars when young, it is normally found in the Atlantic from Florida to Brazil, and in the West Indies. Its eggs and fry drift up the Gulf Stream and into coastal New York waters, but like other tropical fish these succumb to cold water temperatures before reaching maturity.



Spot-fin butterfly fish Up to 8 inches long, it has bright yellow markings and a large black spot on its second dorsal fin. It is typically found in the Bahamas and the Gulf of Mexico.

Squirrelfish A dull red or pinkish and sometimes blotched, it is largely nocturnal, remaining in rock ledges or crevices by day. It can reach about a foot in length and can produc sound by using special muscles. Its rang is typically from North Carolina to Bermuda and Brazil.



Gag grouper Found from Bermuda to the Gulf of Mexico to Brazil, it has big lips and dark squiggly markings that can give it a marbleized look. It can grow up to 38 inches long and weigh 50 pounds.

Source: Peterson Field Guide Series' "A Field Guide to Atlantic Coast Fishes, North America" (Houghton Mifflin Company, 1986).

DEATH IN THE DEEP

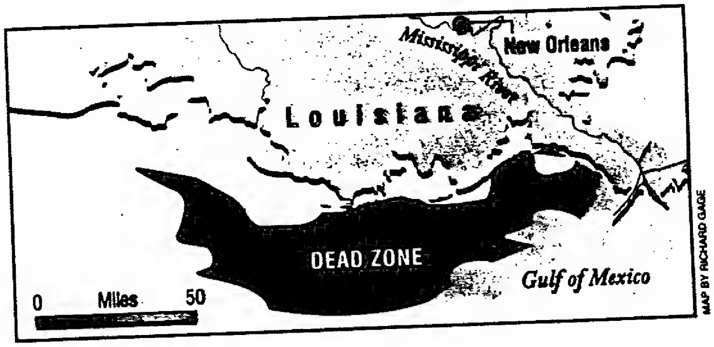
Joby Warrick

from NATIONAL WILDLIFE, June/July, 1999

Just south of Whiskey Pass, where the last of Louisiana's barrier islands gives way to open sea, Gene Foret cuts the throttle and eases his boat across an unseen boundary. All around him the water looks as blue as ever, but beneath the boat an ocean of life quietly fades to black. Foret is entering the "dead zone."

In the space of a few dozen yards, one of America' most productive fisheries becomes startlingly devoid of fish below the upper water layers. Shrimp disappear, too, and so do crabs and anything else that swims. A wall of dead water spreads westward across the floor of the Gulf of Mexico, beginning at this point near the Missippi Delta, stretching as far as the Texas border and reaching up the water column toward the boats on the surface. On this breezeless August day, it covers an area the size of Connecticut.

. . . .



THE SHAPE of the seasonal patch of lifeless water in the Gulf of Mexico known as the "dead zone" constantly shifts, sometimes becoming relatively narrow and deep, as it did last summer (above). The oxygen-depleted patch, which grew dramatically in the early 1990s, is of grave concern to local people like marina owner Johnny Glover (near right), who tracks the zone on a navigational chart, and charter-boat captain Gene Foret (far right), who radios boats already at sea for reports of fishing conditions.

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NEW YORK SHELL CLUB NOTES No. 353 December, 1999 Page 1

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PROGRAM SCHEDULE

Sunday, December 12, 1999 BEAUTIFUL SHELLS Steve Rosenthal	2:00 PM	American Museum of Natural History Edith Blum Classroom
Sunday, January 9, 2000 GRUNGE PARTY	2:00 PM	" " "
Sunday, February 13, 2000 PLAYS & IMPROVISED JAZZ USING LARGE SHELLS Steve Turre	2:00 PM	" " "

HIGHLIGHTS OF SEPTEMBER, 1999 MEETING

A letter from a boy in Albany, N.Y. was read. He is seeking trading contacts. Carl Ehrlich said he would send some shells. On display were some bulletins of other shell clubs and a catalog from ANTIQUARIAAT JUNK, of Holland, listing antiquarian shell literature available. Romuald Czepulkowski took it for study. He also displayed and described a specimen of the rare Leucosyrinx cf. badenpowelli.

The speaker was Melvin Springer, who described, and showed slides of, a recent collecting trip to the Seychelles, a small republic in the Indian Ocean. His photos included scenes in the national capital, Victoria, and of the National Museum of Natural History. Other scenes were of the six miles of beach and a few small islands that he and Sylvia visited. His many underwater pictures were mostly of fish, some of them insistently curious. Their trip to Cerf Isle featured a dive in a submersible. Mel's photos of the catch included one of a red tiger cowry, but this one he had bought. He described the shelling in this part of the world as not great.

The Springers' flight home included a stop in London, where the National Museum of Natural History was a must-see. A guide pointed out to them the Museum's files of copies of Irradians and Shell Notes.

The question and answer period generated a discussion of past travel experiences, especially by Mel and Carl. Some were dredged up from 25 years back.

HIGHLIGHTS OF OCTOBER, 1999 MEETING

What may or may not have been the 474th meeting of the New York Shell Club occurred on October 11, 1999 in the Blum classroom of the American Museum of Natural History.

On a rainy Sunday in the middle of the Columbus Day weekend, traffic in the city was elephantine, the Museum was jammed to near-immobility and four (4) Club members showed up. They were President Carl Ehrlich, the ever-present Nick Katsaras, Howard Israel and the recording secretary. Two o'clock became 2:30 with no sign of the scheduled program presenters. The "meeting" was about to fade away when one presenter, band leader Steve Turre, staggered in, a victim of external and internal traffic. Over the next twenty or so minutes four of his bandsmen appeared one by one, also dazed by the crush of humanity. With two groups of four at one table, an unscripted "program" sort of created itself - music making, talking and listening.

Mr. Turre (Tour-ay) who was making his second appearance with us, and the four sidemen are horn players, and in this globe-trotting aggregation that means they also play on gastropods. The shell/horns they laid out on the table were Pleuropoica gigantes and trape ism, Strombus gigas, Cassis cornuta, Charonia tritonis and variegata, Bursa californica, Voluta, imperialis, a half-grown Syrinx aruanus, Xancus pyrum (dextrous) and one or two others.

In a steady give-and-teke between riffs and tunes the players explained how they make a mouthpiece by cutting off the spire, sometimes augmenting the shape with molded plastic. Some of the spines on cornuta and imperialis had to be amputated so they wouldn't stab the player's face. Mr. Turre's first tool was a hacksaw, but he has graduated to a diamond wheel.

Since shell doesn't vibrate like brass piping, gastropod notes are purer - simpler. They are nevertheless rich and pleasing. Selection of notes and tones is limited to what can be created with lips and tongue, and fingers curled into the aperture to varying depths. So the group has written music to accommodate the possibilities. Much of it is recorded on CDs, and Steve gave copies of three titles to the Club, for the enjoyment of members who have the appropriate equipment.

Shell size doesn't entirely govern the pitch of molluscan music, and the players were interested to learn that there is considerable variation in the diameter, shape and length of the hollow spiral inside. They also wanted to know where their "instruments" had lived, and something about their lifestyles. By the time the session ended, enough information had been exchanged, and enough music enjoyed, to make the rigors of getting there and (one hopes) getting back,wworth the struggle. Carl invited the tootlers to his digs for some shell viewing, and that surely helped.

NOVEMBER, 1999 MEETING

The November meeting, as in past years, took the form of a trip to the Philadelphia Shell Show, on November 6. The reports from those who made the trip rate it spectacular, as always, and maybe the best ever.

BIG BOX BUY

It's the buy that's big - the boxes are small. They're just the sizes, in fact, that conchologists want and need. You can order from Carl Ehrlich (at wholesale prices) by mail or phone, but deliveries will be made only at meetings. These are clear-plastic boxes with hinged tops, and here are the sizes, in inches:

2 x 1.125 x .5	12.4¢ ea.
2.235 x 1.625 x .75	11.6¢ ea.
" " 1.00	11.9¢ ea.
2.5625 x 3.5 x 1.75	31.5¢ ea.
2.875 x 1.1875 x .75	13.5¢ ea.
" " 1.25	16.7¢ ea.
" 2.00 2.00	21.4¢ ea.

AMERICAN POPULATIONS OF INTRODUCED MILK SNAILS (*Otala*): ONE OR TWO SPECIES?

Henk K. Mienis

(reprinted from OF SEA AND SHORE, Spring 1999, Vol. 22,No. 1:25)

Species belonging to the land snail genus *Otala* Schumacher, 1817 (Family helicidae) are confined in their natural range of distribution to SW Europe and NW Africa. Two species are known from both areas: *Otala lactea* (Muller, 1884) and *Otala punctata* (Muller, 1774). These species are well defined and on shell characters they easily separated from each other by the color of the lip: dark brown to black in *O. lactea* and whitish in *O. punctata*. In addition a dent-like protrusion is usually present on the base of the lip in *O. lactea*. Good photographs of both species have been published by Abbott (1989) in his well known *Compendium of Landshells* and by Falkner (1990). Additional species inhabiting NW Africa are still imperfectly known and in need of thorough revision.

All members of the genus *Otala* are edible and have been exploited as a cheap food source since historic times. Even today they are offered for sale in local markets. This has also led to the introduction of *Otala* to other areas.

When Europeans started to traverse the Atlantic Ocean with sailing ships, they had to bring with them enough provisions to stay alive during such long and often insecure journeys. Without doubt landsnails featured among food items which could be kept easily fresh for long periods, at least on ships leaving Portuguese or Spanish harbors. In this way left-overs most probably reached the Americas and were discarded here-and-there intentionally (as has been done with other animals, like goats).

The first record of *Otala lactea* from an American locality goes back to d'Orbigny (1835), who mentioned it from Uruguay. Later on it has also been reported from Argentina, where even today it is collected on a commercial scale in the coastal belt and exported live to the United States, amongst others (Zubillaga, 1999).

The local presence of colonies of so-called *Otala lactea* (of which the official common name reads: Milk Snail, see Turgeon, et al., 1988) in the United States has been reported so far from the following southern states: Arizona, California, Texas, Mississippi, South Carolina, Georgia and Florida (see Dundee, 1974 and Stange, 1979 for further references). Live snails of *Otala* (and other local and introduced/imported species) can be bought also here-and-there in other states as food or fish-bait. In addition it has been recorded from several Caribbean islands such as Jamaica and Cuba (Stange, 1979).

Surprisingly, all records of *Otala lactee* from Uruguay turned out to have been based on misidentifications. In fact, only *Otala punctata* lives in Uruguay. This is most probably also the case in Argentina.

At least part of the literature records from the United States are based on true *Otala lactea*, because in the descriptions of the snails a dark lip is indicated. However, Stange (1979) mentioned in his description -- lip and aperture liver-brown to almost black, sometimes white! From this statement it is not clear whether occasional white-lipped individuals are found in normally-colored populations of *Otala lactea*, or that populations exist in which all the specimens show a whitish lip. In the latter case we are most probably not dealing with *O. lactea*, but with *Otala punctata*, as in Uruguay. In fact Harry G. Lee has recently sent me a sample collected by him in Fernandina Beach, Nassau County, Florida, consisting of perfect specimens of *O. punctata*.

In order to clear up the problem concerning the specific identity of Otala populations in America, I would be very pleased to receive any material from American localities, either on loan or for permanent storage in the National Mollusc Collection of Hebrew University in Jerusalem (see note below). Descriptions of material in collections are also most welcome.

ACKNOWLEDGEMENTS

I would like to thank Dr. Osmar Santos (Rivera, Uruguay) and Dr. Harry G. Lee (Jacksonville, Florida) for sending samples of Otala for permanent documentation in the National Mollusc Collection of the Hebrew University in Jerusalem. The former also shared with me his ideas concerning the Otala problem in Uruguay.

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PROGRAM SCHEDULE

Sunday, March 12, 2000 SHELLING IN THE COOK ISLANDS Mel and Sylvia Springer	2:00 PM	American Museum of Natural History Edith Blum Classroom
Sunday, April 9, 2000 ANNUAL SOCIAL-AUCTION	1:00 PM	Broadway Dance Studio 31-08 Broadway Astoria, Queens
Sunday, May 9, 2000 FRESH WATER MOLLUSKS OF CENTRAL AFRICA	2:00 PM	American Museum of Natural History Edith Blum Classroom
Sunday, June 11, 2000	2:00 PM	ANNUAL MEETING Election of Officers and Directors for 2000-2001

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HIGHLIGHTS OF DECEMBER, 1999 MEETING

The speaker was Steve Rosenthal of the Long Island Shell Club, his subject "Beautiful Shells." He accompanied his close-up slide photographs with comments on the shells and recollections of where and how he had collected or acquired them. The display included cones, marginellids, pectens, Spondylus, Spirula and paper nautilus. A local example was Neptunea lyrata decemcostata, representing a specimen that had recently been brought up from deep water by fishermen, 26 miles off Shinnecock Inlet, south of eastern Long Island. It had never before been collected from Long Island waters.

Marion Sullivan said that she is trying to think of ways to get more people who live in the area to get interested in shells. She is wondering if it might be possible to reach out through the Smithsonian or the Public Broadcasting System. Romuald Czepulkowski will try to find a point of contact with the Smithsonian.

Romuald displayed a specimen of Gemmula (Pinguigemmula) okinawensis. This species was described by MacNeil in 1960 as a fossil.

Romuald's shell, however, was collected off western Australia, at 75 meters, in 1989.

Al noted that the program of the January meeting would be grunge, imported from the Philippines and the Mediterranean.

Romuald offered some observations on computers. As a source of information its plusses are balanced by minusses--for example, many errors in what is available on shells. He added that we could register the Club with Tom Rice to have a website, which might be a source of contacts with potential members.

The door prizes were Conus imperialis, won by Nick Katsaras; Natica scethra, won by Steve Rosenthal; Siphonaria gigas, won by Al Scarpetti, and Turritella variegata, won by Marion Sullivan.

HIGHLIGHTS OF JANUARY, 2000 MEETING

Romuald Czepulski displayed a copy of "Indo-West Pacific Ranellidae, Bursidae and Personidae" published by the Paris Museum of Natural History. It is a monograph of New Caledonia fauna and and revisions of related taxa, written in English and illustrated with photographs in black and white and in color, and with drawings.

Carl had on display a number of striking specimens, most of them rare:

Lyris leonardi, dredged by a research vessel in the Caribbean. This was the second specimen collected.
Lyria kunieni, New Caledonia, recently named.
Provocator pulcher, Reunion.
Conus gubernator parti, giant.
Conus legatus, a pair of giants, gem condition.

Carl collected these:
Cypraea androyensis, west Madagascar.
Chicoreus triplex grosceni, Mad., newly named. 80-100 ft.
" " cloveri, " 1985, 1st from Madagascar
" " zuluandesis, Mad., 1989 80-100 ft.

Romuald showed two Gemmula, one of which seems to indicate that luzonica is a synonym of okinawensis.

The program of the meeting was grunge-picking. The selections of material came from Italy, Greece and the Philippines.

The door prizes were Oliva erythrostoma, won by Al Scarpetti; Nerita versicolor, won by Allen Aigen, and Polinices albumen, won by Milton Werner.

HIGHLIGHTS OF FEBRUARY, 2000 MEETING

President Carl Ehrlich drew attention to a few particularly interesting shells he had collected on a recent trip to the Solomon Islands. They were three Conus gloriamaris, dwarf form, from the Western Province of the Solomons; a Mitra cloveri, found at 150 ft., and Vexillum citrinum, form compressum.

Romuald Czepulkowski displayed specimens of four terrestrial species from Fiji, all in the genus Placostylus. One, koroensis (Garrett 1872), became extinct in the 1900's. The others, seemani (Dohrn 1861), malleatus (Jay 1842) and rugatus (Garrett 1872) are endangered because of deforestation.

The speakers were Jeff Mace and Phil Dietz. With slide photos and narration they provided a close look at the business of conch fishing as it is precticed off Cape May, N.J. Jeff is the seafarer and Phil is a shell dealer and jeweler in N.J. The boat on which Jeff crews supplies Phil as a sideline. Its chief market is the seafood industry. Its quarry is Busycon carica, canaliculatus and contraria, and the end product is scungilli.

Jeff's working day starts with cutting up horseshoe crabs for bait, during a 20-mile sail into the Atlantic in a boat typed as a Chesapeake dead-rise (hull shape), 38 ft. on the waterline. The pilot house is forward, leaving a long working deck. At a marker buoy the job of hauling in a mile and a half of line, and its 80 "pots" begins. The pots are plastic crates, specially designed. The catch, mostly conchs, goes into mesh bags, and the pots are baited and put overboard for another day or two. An occupational hazard is having a loop of line catch an arm or shoulder, whereupon the operator goes in for a cold bath. Jeff's score for 1999 was two.

The catch is sold in the shell, by weight, to the processors. Each full moon brings four days ashore because the conchs stop eating two days before and for two days after, so there would be no catch. Jeff handles about 5,000 conchs in a day's work, keeping an eye out for the occasional variant in color, morph or size. He flagged a canaliculatum that measures 140 mm.which he thinks may be a record. A few specimens that look like left-handed carica show a difference that suggests a new species. These, and other items of interest, have been turned over to Dr. Jerry Harasewich of the Smithsonian for genetic study. Jeff finds that the best way to clean out a conch shell is by freezing it.

Among the inediables that come to light are marginellas of a cies, which Phil could identify only as the Jersey Marginella. No one present could do better. Jeff and his captain are considering attaching small traps to retain small shells that usually fall out of the conch traps.

In the excellent slide coverage are pictures of the boat and work activity, and many of the shells that add special interest to pursuit. These include the mysterious left-hander, color and shape variations, a very rare carica with smooth shoulders, male-female pairs and "pearls" from canaliculata and carica.

The door prizes were Conus tulipa, won by Phil Tate; Phalium bisulcatum won by Al Scarpetti and Liguus fasciatus, won by Carl.

ELI HOROWITZ

Long-time member Eli Horowitz succumbed to a heart condition on December 25, 1999 at the age of 65. Eli and Levana Horowitz joined New York Shell Club in 1987, having a deep interest in the natural world membership also in the Paleontological Association and the Gem and Mineral Club. Eli did volunteer work in the mollusk department of the Museum, and taught in the public school system.

NEW YORK SHELL CLUB ANNUAL SOCIAL & AUCTION

Sunday, April 9, 2000

at

Dorothy Jensen's Broadway Dance Studio
31-08 Broadway, Astoria, Queens

We welcome donations of specimen shells, shell books, and shell-related items, to enhance the interesting selections we now have.

Your attendance and donations are most appreciated because funds raised from the auction cover the cost of our routine activities, which include printing and mailing our quarterly NYSC NOTES.

Also, we need help in providing refreshments, as well as assistance before and during the auction. As in past years, a list of auction items will be mailed to local members and friends about the end of March.

THE THREATENED DWARF WEDGE MUSSEL

Alasmidonta heterodon, family Unionidae

adapted from

NATIONAL WILDLIFE FEDERATION
EnviroAction, June 1999

There are over 30 populations of dwarf wedge mussels from the Connecticut River Drainage south, but some of these populations are evidenced only by a shell. They are not necessarily healthy and reproductively active (USFWS 1998).

Dwarf wedge mussels live in various drainages in the eastern U.S. including the Connecticut Drainage, the Delaware River Drainage, the Tuckahoe Creek (Choptank River)Drainage, the Potomac River Drainage, the New York Drainage, the Nottoway River Drainage, the Tar River Drainage, and the Neuse River Drainage.

Primary threats to dwarf wedges include habitat loss from the damming and channelizing of rivers; water pollution from agricultural, urban, and industrial run-off; and sedimentation and erosion from construction.

The dwarf wedge mussel is a 1½-inch shellfish that lives in river bottoms in the Northeast United States. There were 19 known populations in 1994, down from 70 populations two decades before. Like many freshwater shellfish, this species is endangered by pollution and other problems in streams and rivers. Because mussels feed by filtering plankton from the water, they clean out poisons from agricultural runoff and industrial effluents. When mussels are overloaded by toxics and show a decline, they serve to warn us that our waters are far from healthy and could even be dangerous to people.

Pollutants, dredging and siltation from stream-side grazing and development, and habitat loss due to construction of dams and bridges have contributed to this mussel's reduced range and numbers. Declining fish populations impact dwarf wedge mussels as well, since their tiny larvae must attach to a fish during this brief but crucial stage of development.

Ensuring the recovery of all our native mussels will require better management and cleanup of our waterways, as well as inincreased research and education on these important freshwater creatures.

HOW YOU CAN HELP MUSSELS: Streams and rivers degraded by pollution from run-off, siltation, damming, and channelization pose the greatest threat to the dwarf wedge mussel. You can help to protect this and other freshwater mussels by working to ensure the health of the freshwaters near you. Here are a few suggestions:

Improve Habitat Along Mussel Streams. Streambank erosion and degradation presents a major threat to water quality in freshwater streams and rivers. Silt and polluted runoff are considered to be key factors in the decline of freshwater mussels, including the dwarf wedge. You can help by restoring habitat on your own streamside land or by participating in organized habitat restoration efforts.

Oppose Riverside Development Projects. Streams and rivers are hotbeds for proposed development projects including roads, recreational facilities, and houses. This development often results in the degradation of water quality and the destruction of mussel habitat. By becoming informed about proposed projects and opposing those that pose threats to mussel habitat and water quality, you can help to preserve these important

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Full Membership $12.00 per year
Full Family Membership $15.00 per year
Corresponding Membership $10.00 per year
Foreign Membership $12.00 per year, paid in U.S. currency

The Treasurer-Membership officer should be notified promptly of any change of address.

NEW YORK
SHELL CLUB
INC.

FOUNDED JAN. 1949

SCHEDULE OF MEETINGS

PLEASE NOTE: There may be changes in dates and/or places for meetings from those listed below. Please consult your current issue of NYSC NOTES for any changes.

2000 - 2001

Our meetings are held at the American Museum of Natural History except for special events such as our annual Auction and Social. The Museum is located at Central Park West at 79 Street, New York City, starting at 2 PM. Visitors are always welcome.

On our meeting days, you may gain admission to the Museum without paying the Museum's admission fee by presenting your NEW YORK SHELL CLUB membership card.

NOTE: NEW YORK SHELL CLUB pins available:

$3.50 at a meeting
$4.00 for mail order

The NEW YORK SHELL CLUB meets usually on the second Sunday of the month from September to June. Most meetings are at the American Museum of Natural History, New York City. On meeting days, your NYSC membership card will provide admission to the Museum without payment of the Museum's admission fee.

PROGRAM SCHEDULE

The proposed schedule of meetings for September, 2000 to June, 2001 is the second Sunday of the month at the American Museum of Natural History, New York City. Exact information will be provided in the next issue of NEW YORK SHELL CLUB NOTES.

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HIGHLIGHTS OF MARCH, 2000 MEETING

President Carl Ehrlich announced that corresponding member Dorothy Schmidt had donated her collection to the Club. He had on display two dozen mitras that he had collected in the Western Province, Solomon Islands.

The speaker was Mickey Cohen, well remembered for his two previous presentations. Following a career as a high school teacher in New York City, Mickey has become the manager of the city's Bayswater Point State Park in Far Rockaway. His subject was seaweeds which, he pointed out, are algae, not plants. They are Protists - a new fifth kingdom.

Mickey's slide photos included views of Jamaica Bay, sea lettuce, "spaghetti," kelp and codium, recently arrived from New England and a pest to clam and oyster fishers. Seaweeds, he said, produce sugar and oxygen, through photosynthesis. Their reproduction may be sexual or asexual. They have no flowers, fruits or seeds.

The Sargasso Sea, in mid-Atlantic, is a collecting area for seaweeds that drift from the Gulf of Mexico in the gulf stream. There, after one episode of sexual reproduction, it simply goes on growing, periodically breaking apart. Seaweeds are the first link in the ocean food chain. A slide series depicted the succeeding links.

Seaweeds are important to humans as sources of oxygen, agricultural fertilizers and soil conditioners, and industrial chemicals. They also serve as food, as the coast-dwelling Irish learned during the potato famine. Mickey described them as our best source of iodine. One of his slides showed a kelp collecting ship in New England waters.

The presentation included a number of seaweed species displayed in cards. These are made by arranging wet specimens on a card that is placed on several layers of newspaper to absorb moisture. Directly over the specimen is a layer of waxed paper, and then a top layer of newspaper to absorb moisture at the edges. Also on display were copies of "The Seaweeds" by E. Yale Dawson, W.C. Brown Co., and "Seashores," a Golden Nature Guide by Herbert Zim and Lester Ingle.

The door prizes were Thais orbita, won by Nick Katsaras; a Phalium sp. won by Juan Rivera, and Tellina albinella, won by Milton Werner.

HIGHLIGHTS OF APRIL, 2000 MEETING

The 480th meeting of the New York Shell Club was an annual auction, held at Dorothy Jensen's Broadway Dance Studio, Astoria, Qeens, N.Y.

The doors opened at 11 a.m. and auctioneer Carl Ehrlich was [illegible] for business at 1 p.m. With Romuald Czepulkowski helping at the table, he offered an attractive array of 195 items - shells, books and related artifacts. Denise Ehrlich carried them to their owners.

The most hotly contested shells were:

Conus wittigi, 31.6 mm.	$110
Volutoconus bednalli, 89 mm.	$80
Conus nobilis victor, 34.8 mm.	$65
Voluta marispuma,	$65
Spondylus americanus, - pink w. yel. umbones	$55
Spondylus regius, pinkish brown	$50
Spondylus americanus, 145 mm.	$44
Spondylus sinensis, orange, rare form	$40
Spondylus americanus, 155 mm.	$32
Spondylus regius, 135 mm.	$31

A copy of "American Seashells," second edition, autographed, went for $48. A copy of "Compendium of Seashells," Abbott and Dance, autographed by both, brought $40.

Heavily laden sale and bargain tables generated brisk action, and many book bargains changed hands.

Wine, punch, cakes and snacks were there for the enthusiastic taking, and Carl again sent out for pizza. Carl also treated Saturday's set-up crew to pizza, but not on purpose. Sunday's order was somewhat carelessly delivered on Saturday, so Carl had to do it all over again.

The door prizes were Tibia fusus, won by Juan Rivera, and a Pecten, won by Al Scarpetti.

HIGHLIGHTS OF MAY, 2000 MEETING

President Carl Ehrlich mentioned the death of Ruth Turner, of Harvard's Museum of Comparative Zoology. Henry Gordon added reminiscences on her contacts with the Club.

Romuald Czepulkowski displayed specimens of two new species - Fusinus cf. kazdailisis and a Bursa.

The speakers were Carl and Denise Ehrlich, who described a trip to Madagascar last year that combined shelling and palling around with lemurs. They became closely acquainted, and festooned, with three species of the friendly, curious creatures - the ringtail, the brown and the white, or dancing lemur. Carl noted that they spent heavily on bananas for their new friends.

Carl described Tana, the capital city as large but poor, and dangerous at night. Streets and roads are in bad condition. Oxcarts and rickshaws are the most numerous vehicles. Slide photos included scenes in the city and at a lemur preserve.

Brian Bailey was also a member of the expedition, which concentrated its shelling on three areas in the south of the island. Day and night diving, mostly at depths of 80 to 140 feet, was richly rewarding. Photo coverage included shells before and after cleaning, and genera including Haustellum, Murex, Chicoreus, Mitra, Lyria and nine species of cones. In one shot are textile cones in more than 30 colors, and in another, 11 C. gubernator, all large and all in different colors. A Conus cononicus is larger than the listed record.

Carl and Denise see the Maldive Islands as their next target.

The door prizes were Stellaria solaris, won by Al Scarpetti; Ancillista velesiana, won by Denise, and Lambis millepeda, won by Milton Werner. The meeting was adjourned at 4:00 p.m.

HIGHLIGHTS OF JUNE, 2000 MEETING

President Carl Ehrlich announced that Romuald Czepulski would be inactive in Club affairs for the foreseeable future because of other demands on his time. He drew attention to a price list from Dan Spelling.

The minutes of the April and May meetings were read and accepted. For the Nominating Committee, Ed Cowles presented a slate in which Carl would serve as both president and treasurer, Marion Sullivan would become corresponding secretary, and other incumbents to be re-elected. Charles Wightman was recommended for appointment to the post of production editor for "Shell Notes." It was moved and seconded that the Secretary be empowered to cast one vote for the entire slate. This was approved and done.

It was noted that Theta Lourbacos has served as treasurer since 1982. Further, for many years she has been production editor for these Notes, typing the pages for each issue (ranging from three to five pages or twelve to fourteen). The completed issue was then mailed to members, friends, and other interested organizations here and abroad.

Carl noted that before the day's meeting a museum guard had expressed the opinion that the museum has been neglecting the Club. The meeting room is frequently not unlocked on time, and the furnishings, even chairs, are inadequate. Al Scarpetti said he would ask Larry Potter to mention the situation in a letter to the museum. It was also noted that it is time to bring the membership list up to date and distribute copies.

The program presenter was Dr. Stephen Tettelbach, professor of marine science and biology at the Southhampton College of Long Island University. Steve is well remembered for his presentation on reef ecology, at the May, 1998 meeting. His subject this time he calls "The Flight of the Blue-Eyed Scallop."

Argopecten irradians is found from Cape Cod to New Jersey. Dredging it, and selling the adductor muscle to the food industry was a rewarding occupation in many areas of eastern Long Island. Since 1985 calamitous drops in scallop populations have almost wiped out the industry there. A brown tide - an infestation of micro-organisms - started the decline, and at least four more since then have cancelled the recoveries. The cause of brown tides is still not known, and Steve's major effort has been to make the most of the good years.

Guided by years of observing, measuring and charting, he has tried reseeding in various places in the three irradians ecological areas of eastern Long Island - the Peconic, South Shore Bay and Oyster Bay systems. The larvae, bought from hatcheries, are expensive and the results have rated from zero to fair. Reseeding is done by hand, in spots chosen after consultation with baymen, but success is a gamble. Storms can wash the larvae into the ocean or Long Island Sound. Developing a shell is only partial protection. Juveniles that don't find something to attach to can smother in sand. This was proved by placing specimens on a sandy bottom that they would sink into. They were located later by looking for a strip of red ribbon that had been cemented to their shells. Corks fastened to the free ends kept them floating above the sand. When they grow large enough to detach they are prey to oyster drills, gulls, crabs of barious species and starfish. During the warmer months they can escape starfish by imitating castanets and flipping away, but during the winter they are dormant.

Reseedings in 1989 and '90 were mildly successful, but in the winter of '90-91 an infestation of worms riddled the shells, making them weak and almost no defense against predators.

Following Japanese methods, Steve has tried gathering juveniles and suspending them in cages called lantern nets until a certain size is reached. This has made the survival percentages higher, but eastern Long Island's scallop industry is still a very small one.

COINS

Jed Stevenson

NEW YORK TIMES

September 23, 1990, Section 1, p. 67

The use of shells as money continued in New Britain until well into this century.

Shell money was a significant means of exchange among many aboriginal cultures. Native Americans used beads made from the shell of the quahog clam to barter for goods and this wampun spread far inland. African slave traders made use of the cowrie shells to purchase slaves and other goods.

The greatest use of shells was in the Bismarck Archipelago east of New Guinea. There on the island of New Britain huge loops of thousands of shells were considered wealth. This shell money is called tambu or palatambu in New Britain, but the name diwarra, as such shells are known in other islands, has become common.

Tambu or diwarra are made from the small humpbacked shell of the Nassa camelus, a mollusk that grows abundantly in mangrove swamps surrounding the island. Each spring natives of the Nakanai district of New Britain would paddle and wade among the mangroves and collect thousands of the 3/8 inch long creatures in palm leaves or bamboo sections. The still-living mollusks were brought back to the village and stored in each native's hut where the stench of decay became greater and greater. Other New Britain natives would paddle near the village and trade axes, knives and cloth for the still rotting shells.

These foul-smelling shells would then be worked into diwarra by the new owners. The shells were buried for a year or more to improve the color and let insects scour the insides. Then the shells were dug up and each was placed at the bottom of a coconut husk where the back of the shell is broken with a knife creating a hole.

The shells could be strung on stiff strips of rattan. The stringing was a tedious and tiring business and each strip of rattan was a foot or two in length. These finished strips with their evenly spaced shells were joined together by a single shell covering the joint. In this manner many lenths of diwarra could be strung together. Six-foot strings were common and might contain 300 to 400 shells in each fathom.

Short lengths could be broken off for payment and this distinguishes the diwarra from wampum types of shell money which which were not broken into denominations. A short piece of diwarra might be displayed in a coconut shell or a glass bottle. But the wealthiest of New Britain were those who collected enough diwarra to make a loloi.

Loloi were huge rings of shells made from 100 feet or more of the diwarra. The six-foot secions were joined together and coiled into huge loops and tied together with rattan. These would eventually look like a stiff wide belt of thousands and thousands of shells. Some loloi reached the size of cartwheels and were carried on long poles.

How much were the diwarra worth? Six hundred feet might purchase a wife or a canoe while three feet might suffice for a chicken and a few shells would buy a betel nut. Theft of diwarra was punishable by death, but a murderer could buy his way out of his crime with as little as 300 feet of the shells.

When the Germans came into the archipelago they did not ban the use of the money by the natives but outlawed its use among colonists. Thus the use of shell money continued well into this century.

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Individual Membership---------------	$12.00 per year
Family Membership -----------------	$15.00 per year
Corresponding Membership---------	$10.00 per year
Foreign Membership----------------	$12.00 per year(U.S. $)

The Treasurer- Membership officer should be notified promptly of any change of address.

COMING EVENTS

DECEMBER 10: SHELLS OF THE MALDIVES

Club President Carl Ehrlich will describe his recent diving trip to the remote Maldive Islands with slides and a display of shells.

JANUARY 14: TO BE ANNOUNCED

MEETING DATES 2001

JANUARY 14
FEBRUARY 11
MARCH 11
APRIL 8
MAY 13
JUNE 10
SEPTEMBER 9
OCTOBER 14
NOVEMBER 11
DECEMBER 9

Events for those meetings will be announced in subsequent issues of Shell Notes.

WHERE WE MEET

Regular meetings are held on the second Sunday of the month at the American Museum of Natural History, Central Park West at 79th Street, New York City, starting at 2:00 P.M. We use room 319 on the third floor. It is quite close to the Main Entrance on Central Park West. There are two exceptions; the November trip to the Philadelphia Shell Show, and the April Club Auction and Social. Visitors are always welcome.

On our meeting days, you may enter the Museum without paying the Museum's admission fee by presenting your NEW YORK SHELL CLUB card.

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HIGHLIGHTS OF THE SEPTEMBER MEETING

The speaker was Chris Buchman of the Riverhead Foundation for Marine Research and Preservation. His subject was the Foundation's Marine Mammal and Sea Turtle Stranding program of New York State. In a brochure that Chris distributed, the work of the program is described this way: The program was developed in 1980 to respond to any whale, porpoise, dolphin, seal or sea turtle stranding on Long Island or in New York State. If an animal washes up alive, medical care and assistance are given, and the animal is eventually released back to the wild whenever possible. Post-mortem examinations are conducted on dead animals. Tissues are collected for researchers nationally and internationally for analysis, and skeletal remains are prepared for educational institutions. Since it was established, the program has handled over 2,000 animals. Among the strandings was the first and only successful rehabilitation and release of a baby sperm whale, as well as seals and many sea turtles.

The brochure provides advice on what to do immediately if a stranding is encountered and gives the phone number of the 24 hour response hotline: 631 369-9829. The animals encountered in the waters of Long Island and New York State are the common, bottlenosed and white-sided dolphin; the humpback, fin, pilot and minke whale; the harbor seal , and the green, loggerhead, leatherback and Kemp's ridley sea turtles. Chris explained how recovering animals, at the Riverhead L.I. facility are given treatment with the least possible human presence. This is done to suppress adverse psychological influence when the animal is returned to the wild. He described the harmful and deadly effects that discarded objects and pollutants have on marine life. He also showed slide photos of the rescue and treatment of some of the program"s patients. A long question and answer period followed his presentation.

Chris displayed examples of turtle shells, seal fur and seal skulls, and a number of plastic bags that were removed from the gut of one turtle.

HIGHLIGHTS OF THE OCTOBER MEETING

Charles Whitman reported that he has gotten the Club on the air with an e-mail address: nyshellclub@yahoo.com. Having recently replaced Theta Lourbacos a production editor of Shell Notes, he expressed interest in inspiring members to submit articles, observations and what-have-you. The editor fully agrees, and certain members will be approached directly. All others are urged to be self-starters.

Carl Ehrlich displayed a specimen of the rare volute Cymbiola chrysostoma (Swainson, 1824). It was collected by a fisherman in Java, and is one of very few brought to light.

The program was a shell swap, and many fine specimens moved between collections. The door prizes were Oliva annetta, won by Marion Sullivan; Chicoreus palmarosae, won by Ed Cowles, and a murex won by Al Scarpetti.

FOUND GOLD

Every year during the first week of April, the people of Flinders Island ,Tasmania, begin watching the beaches for the first signs of the Paper Nautilus, wondering if that year will bring a wash of twenty or twenty thousand of the fragile egg case treasures. Most years bring a wash of one hundred, maybe two hundred shells; other years, as few as twenty. And then for some unknown reason, once every seven to eleven years, this relative of the squid and the octopus beaches in mass on the remote sand beaches of Flinders Island in the Furneaux Island Group off the northern coast of Tasmania. The beached nautilus consistently responds to human attempts to refloat it by immediately rebeaching itself. It is the subject of ongoing research and much speculation.

One week after the appearance of the first shell, collecting begins in earnest. During those special years, high tide signals the start of a race between humans and hordes of aggressive gulls for nautilus left by the receding tides. For two months, talk of the nautilus dominates local conversations and collecting displaces normal life as houses, sheds and washbins fill with the fragile white egg cases. People adopt the rhythm of the tides. Collecting becomes a "round the clock" obsession; the work being done on foot, by motorbike and landrover. The night is lit by headlights, flashlights and even "roo lights". Low tide becomes a time for food, chores, sleep and incessant talk of nautilus.

The Arganauta are members of the Class Cephalopoda and closely related to squid, octopus, and the shell-bearing Chambered nautilus (Nautilus). The female remains inside her egg case with the assistance of two suction cup-bearing arms that cling to the interior cornice. Argonauta nodosa ranges in size from less than an inch to almost ten inches. Beached egg cases frequently contain remnants of unhatched eggs.

Reprinted from Mitchell Vol. 11 No. 8 1991

MEASURING THE METAL OF MUSSELS

Scientists appreciate mussels not just for their taste but also for their value as indicators of water quality. The animals retain pollutants found in their aquatic habitat, withstand dirty environments, and remain in the same spot for all of their adult lives.

Now, new reseasrch is distinguishing which contaminants the mussels take in from surrounding water and which they pick up from their food, phytoplankton. Although regulators usually measure dissolved pollutants to set water quality standards, contaminants in plants and sediment may sometimes prove more important says Nicholas S. Fisher of the State University of New York at Stony Brook.

In two studies, Fisher and his colleagues examined the concentrations of seven coastal pollutants in two common, closely related, mussels, Mytilus galloprovinciales Lamarck, 1819 (Mediterranean Blue Mussel) and M. edulis Linne', 1758 (Common Blue Mussel).

They exposed the animals to water and phytoplankton laced with the radioactive isotopes of these metals. After measuring the concentrations and locations of the isotopes in the mussels, the researchers put some of the animals in mesh cages off the Mediterranean coast for up to 4 months and left others in aquariums containing Mediterranean seawater.

The selenium, lead, cobalt, and americium stored in the mussels came mainly from phytoplankton, Fisher and colleagues reported in the September 12, 1997 Marine Ecology Series. The animals absorbed most of their cadmium from the water. Whether zinc and silver were absorbed primarily from water or food depended on the water conditions.

How much of each contaminant the mussels took in varied considerably. For instance, the animals absorbed 4 percent of americium present in the food or water they consumed and about 60% of the silver, Fisher and colleagues noted in the November 1997 issue of Environmental Science & Technology.

Once inside a mussel, the pollutants met with different fates. The animals took from 10 to 60 days, depending on the metal, to expel half of the original amount absorbed.

The authors developed a mathematical model for determining the relative importance of food and water as sources of pollutants in mussels. The model also predicts the amounts of the various metals that the animals will accumulate under varying water conditions.

The metals remain in the mussels' feces for different lengths of time, the team reports. Whereas half of the silver leached out in 18 days, it took 107 days for half of the americium to disperse.

Studying mussel feces "sounds awfully obscure, I realize", says Fisher, but contaminants pass from fecal matter into sediment , where worms and other fish foods dwell.

Reprint of an arcticle in Shell-0-Gram Volume 38 (2), March -April 1997

EXOSKELETONS IN THE FAMILY CLOSET -- OUTBREAK #2

Thanks to a storm of apathy, there were no expressions of outrage over episode #1 of this assault on the senses. Apathy is not an editorial goal, but in this case it's appreciated - and, unfortunately, encouraging. So if your threshold of pain is high enough, see below. To repeat the rationalization put forth the first time, in Shell Notes #347, June, 1998:

Suppose, with your collecting expertise, you discover new species. It fits, beyond quibble, into an existing genus. But your brilliant research throws new light on the genus, and you realize that it should go into a new family. So you erect the new family, and maybe a subfamily, and you name them..... what?

Don't panic. Sometimes a name sort of suggests itself, as in the recent instances, guaranteed genuine and authentic, listed below.

GENUS AND NEW SPECIES & SUBSPECIES	NEW FAMILY	NEW SUBFAMILY
GASTROPODS		
Gari cooperi	Celebridae	
Fulgur fulminata sporadica	Fatalidae	
Astraea pulchra	Beauidae	
Mathilde nuda	Obscenidae	
Canaria fortidentatum	Monstrosidae	
Zonaria rustica provincialis	Insularidae	Colinae
Katherine aragoni	Incompatibilida	
Engina plana oldi	Libidae	
Syncera musica	Rhapsidae	Symphinae
Chorus Mixta	Melidae	Harminae
Margarites leopardus ater	Voracidae	
Babylonia truimphans	Barbaridae	
Harpa marxi	Hilaridae	Philoginae
Sigaretus hazardi	Jeopidae	

GENUS AND NEW SPECIES & SUBSPECIES	NEW FAMILY	NEW SUBFAMILY
BIVALVES		
Bankia theeva	Atrocidae	Felinae
Venus seminuda	Subliminidae	Cushinae
Cardium simplex	Naividae	
Laevicardium childreni	Frivolidae	Proginae
Aphrodite crossei	Incongruidae	
Codakia lenzi sharpei	Acuidae	
Botula limicola	Fruidae	
Solamen wisemani	Sagacidae	
CEPHALOPODS		
Spirula socialis	Convivialidae	
Argonauta piratica	Rapacidae	Larcinae
Moschites gigantea	New jersidae	

(If “Libidae” doesn’t seem to make the same good sense that all the rest do , think back to WW I , or check with your grandfather.)

Anonymous (Wouldn’t you)

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SHELL CLUB INC.

FOUNDED JAN. 1949

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COMING EVENTS

MARCH 11-"OUR BEACHES ARE MOVING BUT WHY --AND WHERE?

JOIN MARINE EDUCATOR AND LECTURER, MICKEY MAXWELL COHEN, WHEN HE RETURNS TO THE NEW YORK SHELL CLUB FOR HIS THIRD VISIT. HE WILL PRESENT ANOTHER SLIDE-ILLUSTRATED LECTURE, THIS TIME DEALING WITH BEACH PROCESSES-- THE WAY WIND AND SURF MOVE SAND FROM PLACE TO PLACE, SOMETIMES CREATING NEW BEACHES AND SOMETIMES WIPING OUT OLDER BEACHES, ALONG WITH HOMES AND ROADS. HE WILL ALSO DISCUSS MAN'S FUTILE ATTEMPTS TO CONTROL THE FORCES OF NATURE BY MEANS OF JETTIES, GROINS AND BREAKWATERS. OF SPECIAL INTEREST TO SHELLERS, HE WILL EXPLAIN WHY SOME DAYS ARE "BONANZAS"WHILE OTHER DAYS RESULT IN EMPTY COLLECTING BAGS.

APRIL 8 --- ANNUAL SHELL AUCTION

MEETING DATES 2001

JANUARY 14
FEBRUARY 11
MARCH 11
APRIL 8
MAY 13
JUNE 17
SEPTEMBER 9
OCTOBER 14
NOVEMBER 11
DECEMBER 9

Events for future meetings will be announced in subsequent issues of Shell Notes.

WHERE WE MEET

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On our meeting days, you may enter the Museum without paying the Museum's admission fee by presenting your NEW YORK SHELL CLUB card.

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BY ALAN AIGEN

HIGHLIGHTS OF THE DECEMBER MEETING

Al Scarpetti said he would get in touch with David Doubilet and ask him to present another program. He noted that Mickey Cohen would again speak in March.

Romuald Czepulkowski displayed a specimen of Cochlespira travancorica (E.A. Smith 1896).

The speaker was Carl Ehrlich, who described a collecting trip to the Maldive Islands in August. He and his wife, Denise were joined by Brian Bailey. The island group is about 500 miles southwest of India and consists of about 1200 islands, only 200 inhabited. Heights above sea level are six to nine feet. Two weeks of collecting started at the main island , Mali. Since only scientific collecting is allowed they were accompanied by a representative of the Bureau of Fisheries, a man named Samee, who vouched for their permit. They spent most of their time moving from island to island on a comfortable live-on-boat. Compressors and other diving gear were on another boat, manned by a dive-master and a crew of six. Samee had done little shelling before, and saw the trip as a start toward a natural history musuem.

Diving usually twice a day, the group made a fine haul. Carl displayed about 50 specimens, among them Spondylus lingefelis, which Carl said is the only example known from the Indian Ocean. This was one of the shells he gave to Samee, part of a good start toward the museum. Many shells were so encrusted that they could be detected only if they moved. Carl did a good job of getting them clean.

Denise's slides of scenes and shells included one of four Cypraea tigris-- two reddish and two pale, white with brown spots. A Strombus marginatus septimus may really be a new species.

A pleasant diversion was a swim with pilot whales, which allowed the interlopers to get within 20 feet.

The door prizes were Polinices melanostomus, won by Larry Potter, and Bufonaria nana, won by David Kuba.

BUMBLING ALONG WITHOUT THETA

Recent changes in the format and the names to be seen in these Notes reflects the melancholy fact that Theta Lourbacos has been forced to resign her position as editor. A painful hip condition makes it difficult for her not only to get around, but to spend hours at the typewriter. She did both of these things as editor and production chief of these pages - and also as Treasurer - and also as Corresponding Secretary! Now a few of us are trying to fill her shoes.

Theta handled all of her responsibilities extremely well, and for many, many years. And until it became too difficult for her to attend meetings she was the standing incumbent in an unofficial, untitled position that might well have been given a title: "Running the Club." Theta always knew what would have to be done , and when, and how. Her low-key reminders kept us on track and moving. Her considerable contributions and her smiling presence are much missed.

All of us who know you thank you, Theta- and we wish you well.

" MOLLUSKS AND OUR WORLD" TO CLOSE

The"Mollusks and our World" exhibit at the American Museum of Natural History (which you may remember as"Mollusks and Mankind") will close permanently to the public on March 5, 2001. The hall will be dismantled and used temporarily as a staging area for the renovation of the Hall of Ocean Life. Marine invertebrates (which include many mollusks) will be incorporated into the new Hall of Ocean Life.... For those wishing to see it one last time be sure to visit before the deadline.

THE BUSYCON WHELKS OF THE FLORIDA ICE AGE

BY ALLEN AIGEN

The busycon whelks of the Florida ice age tell a story that is similar to, but distinct from that of the stromboid conchs which I wrote about for the September 1997 issue of these Notes. The Busyconinae, a subfamily of the melongenids, is restricted to the east and Gulf coast of North America. Although found in tropical waters, they are basically a paratropical or subtropical group. During the series of cold spells that culminated in the ice age glaciation, their diversity greatly increased, and then decreased in the Everglades basin where I collect. Please refer to the chart of time and rock units below.

Whelks are good subjects for considering problems in evolution and biogeography. They are fairly numerous (although as predators, less so than the stromboid conchs), large, usually well preserved, and with distinct features to characterize species. They are also a source of dispute in living specimens, with colonies characterized alternately as species, subspecies or local variants, depending on the author's prejudice. They lay eggs in strings of capsules that hatch out as miniatures. They spread slowly, therefore, and can be restricted to colonies by minor geographical barriers.

I had previouly, conservatively, treated the genus Busycon Roding, 1798 as all-encompassing for the subfamily. Researching this paper, however, has convinced me that its currently accepted subgenera should be elevated to genera, as many researchers already have done (Hollister, 1958). These genera are consistently separate throughout geologic time, forming distinct , monophyletic groups, separating but never crossing or mixing. There are accordingly six genera of busyconids that I deal with, although there are earlier extinct genera not included in this study. The subfamily dates back to Cretaceous forms, some 100 million years ago.

Busycon (sensu strictu) is represented by the knobbed whelk, B. carica (Gmelin, 1791). I have this from the late Pleistocene Fort Thompson Formation, and it still occurs all along the east coast, to mid-Florida. This is typically a large, thick shell with knobs on a rounded shoulder. Although represented in the Pliocene, this genus has not been found in the Caloosahatchee Formation. The controversial modern forms (e.g. B. eliceans) are apparently not represented in the areas where I have collected.

Busycon Wenz, 1943, is represented by many fossils, but older or from colder waters than the ones I collected. It is represented now by only one species, our club symbol, the channeled whelk , B. canaliculatum (Linne, 1758). This species ranges from Cape Cod to northeast Florida. Species of this genus are moderately large, with a generally scalariform spire and a square channeled suture.
Fulguropsis Marks , 1950, is like a small version of Busycotypus. The main difference though, is the v-shaped sutural channels. The best known modern species is the pear whelk, F. spiratum (Lamarck, 1816) which occurs along the southeast

and Gulf Coasts. This species is also found throughout the Pleistocene in a few different forms.

Busycoarctum Hollister, 1958 is a moderately large genus with very long siphons, and non-channeled sutures. It is best known from the modern turnip whelk of the Yucatan, B. coarctatum (Sowerby, 1825). Petuch, 1988, considers this and two other uncommmon Gulf species to have been evolved locally in a "relict pocket " from similar Pliocene species that otherwise went totally extinct elsewhere. (Relict pockets in the Caribbean were the basis for Petuch's controversial 1987 book on new Caribbean faunas. I have one Caloosahatchee species that does not closely resemble the local Pliocene species, and may have evolved from farther north.

Pyruella Petuch, 1982, an extinct genus, is very similar to Fulguropsis but has little or no channeling. I have two species from the early Pleistocene, but there were at least six in the preceding Pliocene formations of Florida. It is not known past the early Pleistocene.

Echinofulgur Olsson and Harbison, 1953, is a very distinct genus with only one species known from the Pleistocene. E. echinatum (Dall, 1890), known only from the Caloosahatchee, with a subspecific form from the underlying Pliocene, is like a small Busycon, but with two rows of large spines on the body whorl. Since modern busyconids use their outer lip to pry open bivalves, this genus may have swallowed prey whole. Spines may prevent lip breakage by crabs and make Echinatum hard to swallow for large fish. Never very common , this genus is known from only two species, over a very long time span, probably due to missing (eroded) rock units.

Fulguropsis spiratum floridanum (Olsson and Harbison, 1953) is the Early Pleistocene form of the modern pear whelk, from the Caloosahatchee Formation. This subspecies can be distinguished from modern forms by its deeply excavated sutural canal. It is low-spired in maturity, commonly with weak spiral lirae outside and strong lirae inside. The shell varies from fairly thin to thick. Immature specimens vary widely in strength of the lirae and relative spire height, both of which generally decrease with maturity. I have one mature, very high-spired, narrow specimen, which may be an odd variant or a separate, rare subspecies.

Fulguropsis spiratum is separated into two modern subspecies. The east coast form, F.s. pyruloides (Say, 1822) is considered by Petuch to be a separate species. It is smoother and thinner-shelled than its Gulf coast equivalent, F. spiratum sensu strictu. The Gulf form also has strong lirae inside the aperture. The material I have from the Mid-Pleistocene Bermont Formation spans the gamut with relatively smooth shells, strongly lirate shells, thick and thin shells. But they all seem to be part of the same population, with most shells somewhere in the middle. Assuming that they were not already separate, non-interbreeding populations (sister species, which cannot be easily distinguished) the two subspecies probably split when the glacier lowered the sea level, effectively isolating the east and Gulf coast forms with land in between, as it is today. Isolated small populations can be quickly dominated by one form or another, even if neither had a clear ecologic advantage, just due to luck favoring one group over the other, a process called genetic drift. Although large populations are subject to many conflicting forces that tend to produce stasis, genetic drift can change a small population in a few thousand generations or less. Geologically speaking, that is the blink of an eye.

We are left with the question of what to call the Bermont forms of this species. It is possible to try to place all specimens into either of the two modern subspecies. Then perhaps take the really different forms, like the small, nearly smooth forms that don't quite fit, and call them something new. But most of the submature specimens are a toss-up, and many of the mature ones also seem to be assignable either way. Perhaps we should call all but the oddest forms a new Bermont subspecies. But that will leave the problem of needing a large sample of the population to know which sub-species you have, which is not practical.

The large variability of a small population during times of stress has been documented for such diverse species as 500-million-year-old trilobites in Western North America, and fresh-water, ice age snails in variable lakes in Africa (Williamson, 1982). This short-term variability leads to new species that then spread out and replace the previous species that did not survive the stress. This is how punctuated equilibrium works, alternating long periods of stasis with new species in a changed environment that seem to come from nowhere. Usually this variability is restricted to a shorter time frame, and is rarely documented. Perhaps the variable climate during the Bermont led to a retention of variety. Incidentally, the variable trilobite forms were left unnamed, but new snail forms were given names. I will leave the Bermont forms as F. spiratum ssp?

Another distinct modern Fulguropsis species is F. plagosum (Conrad, 1863). Abbot, 1974, considers this to be an offshore subspecies of F. spiratum, which differs in retaining the angular shoulders and high spire of immaturity into the adult size. I do not know if it can be consistently distinguished in immature specimens, since they all look much alike when young.

There are also two other Texas forms, F. texanum and F. galvestonense both (Hollister, 1958), which form distinct, high-spired colonies today. I consider them subspecies of F. plagosum.

The problem comes if all offshore forms are really separate, non interbreeding species. Most modern monographs of, for instance, cones or miters, lump the near-shore and offshore forms. Perhaps this is wrong. It is hard enough to distinguish live populations; fossils are more arbitrary, as they no longer can interbreed. Probably we will have to continue to decide on a case-by-case basis.

There is a Bermont species with angular shoulders that Petuch considers the probable ancestor of F. plagosum. F. feldmani Petuch, 1991 is a deepwater species that apparently split off from F. spiratum in the short time between the end of the Caloosahatchee and the begining of the Bermont, which is apparently represented by a gap in the record. It is relatively small and low-spired. F. feldmani may well have died off without descendants, because it would be just as easy to derive F. plagosum from F. spiratum by retaining the immature characteristics into adulthood, a common process known as neotony. It would require only about two changes in the genes.

Sinistrofulgur contrarium (Conrad, 1840), is a moderate-sized, narrow, usually moderately low-spired left-handed shell with a rounded to slightly angular shoulder. Olssen and Harbison, 1953, assigned this species to the modern lightning whelk, S. sinistrum (Hollister, 1958), since there is a colony of round-shouldered S. sinustrum, and individual small specimens may be difficult or impossible to assign with certainty. However, they are clearly distinct species. The large, heavy shell of a mature lightning whelk stands out in any upper Bermont or Fort Thompson deposit. They just do not occur in the Caloosahatchee Formation. (They may not occur in the lower Bermont, but stratigraphy is difficult when you are dealing with the dredge piles.)

S. sinistrum is a rather variable species. I have specimens with flat spires and with elevated spires, shoulders round and smooth or sharp and knobby. I would have a good collection if I could handle a great many of the large specimens, but I would have to pay to ship them home!

There is a distinct form of S. contrarium found only in the lower Bermont, where it replaces the common Caloosahatchee form. Described as S. rosae (Petuch, 1991), it probably should have been called a subspecies, as Petuch did in 1988. It is very thick-shelled, with strong lirae inside and out. These characteristics are, of course, very variable for many species of this subfamily.

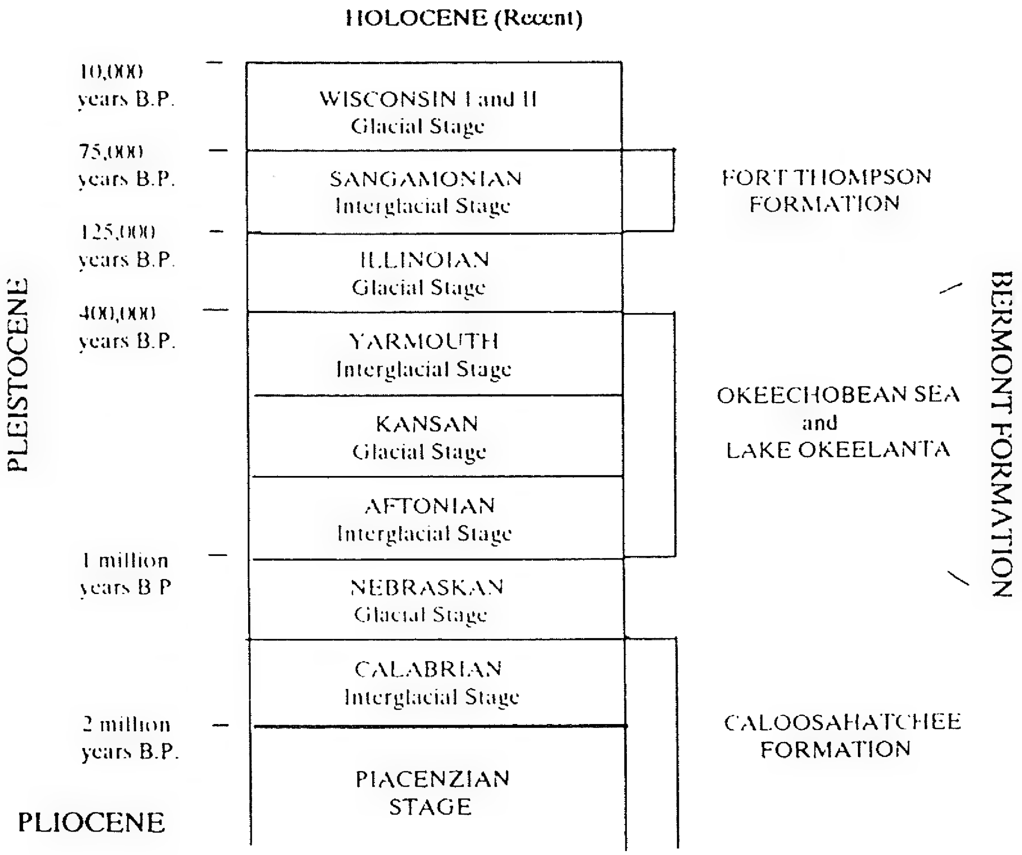
Pyruella, a common Pliocene genus, survived into the Caloosahatchee as only two species. P. planulatum (Dall, 1890) is a small, smooth, high-spired species with rounded shoulders and only a hint of a sutural canal. A very similar, but larger, very variable species is P. eismonti, (Petuch, 1991). It apparently evolved from P. planulatum late in the Calabrian. If so, it demonstrates that the suppression of a trait does not mean the elimination of it. Besides being larger (over 130 mm), P. eismonti has strong to very faint lirae and is thicker-shelled with lirae on the outer lip. It also has a distinct knob in the posterior end of the inner lip when mature.

Busycoarctum rapum (Heilprin, 1887) frequently has a long,, slender siphon that is usually making it look like a Pyruella species. It is medium-sized and rounded, with slight knobs and a low spire. It apparently did not survive the cold at the end of the Calabrian as there are no Bermont species. As noted earlier, the modern species are likely to have been descended from small, relict colonies of Pliocene forms offshore in the Gulf of Mexico.

The busycon whelks are less appreciated here, where they are common, than elsewhere in the world. Perhaps now that you have a bit of their history, and idea of the ways that they may evolved, you may look at them in a new light. You may even try to appreciate the messy systematics of the group as being the result of scientific struggle to understand this variable group . Many people, however, prefer simple, certain, stable names, because they don't have to change labels, and they can feel sure of what they have.

6 THE EDGE OF THE FOSSIL SEA

Pleistocene time line, showing the American glacial and interglacial stages and southern Floridian geological formations. (B.P. = before present time)



LITERATURE (annotated)

Abbott, R.T. 1974. American Seashells. second edition. Van Nostrand Reinhold Co., NY 663 pp., 24 pls. [conservative overview of the modern species]

Hollister, S. C. 1958. A review of th genus Busycon and its allies--Part 1. Palaeontographica Americana 4(28):1-124. [the major sytematic revision]

Olsson, A.A. and Anne Harbison. 1953. Pliocene Mollusca of Southern Florida. 590 pp, 130 pls. 1990 reprint, Bailey-Matthews Shell Museum, Sanibel, Florida [basically Caloosahatchee shells].

Petuch E. J. 1987. New Caribbean Molluscan Faunas. The Coastal Education and Research Foundation, Charlottesville, Virginia. 154 pp. [biogeography challenges status quo; systematics weak and widely criticizied]

Petuch, E. J. 1988. Neogene History of Tropical American Mollusks: Biogeography and Evolutionary Patterns of Tropical Atlantic Mollusca. The Coastal Education and Research Foundation, Charlottesville, Virginia. 217pp. [valuable overview in spite of problems with details of systematics]

Petuch, E.J. 1991. New Gastropods from the Plio-Pleistocene of Southwestern Florida and the Everglades Basin. Special Publication No. 1, W. H. Dall Paleontological Research Center, Florida Atlantic University, 96 pp. [mostly uncommon shells, from a wide variety of places and times]

Petuch, E. J. 1992. The Edge of the Fossil Sea. Publication No.2, Bailey Matthews Shell Museum, Sanibel, Florida. [written as an overview of the Bermont; very readable]

Williamson, P.G. 1982 Paleontological documentation of speciation in Cenozoic molluscs from Turkana Basin in Evolution Now-- a century after Darwin. J. M. Smith, ed. W. H. Freeman and Company, San Francisco, 239 pp. [technical, but worth reading]

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ANNOUNCEMENTS

THE CONCHOLOGISTS OF AMERICA annual convention will be held on July 7-11 in Port Canaveral, Florida at the Radisson Resort at the Port. To register call or write Bobbi Cordy, 385 Needle Blvd, Merritt Island , Fl 32953 (321-452-5736. E-mail: cordy@yourlink.net

COMING EVENTS

MAY 13- CLUB PRESIDENT CARL EHRLICH WILL BRING SPECIMENS FROM HIS EXTENSIVE COLLECTION, MOSTLY SELF-COLLECTED DURING DIVE EXPEDITIONS. HE WILL ALSO BRING A GROUP OF UNIDENTIFIED MITERS AND SOURCE MATERIAL. WE WILL BE INVITED TO HELP IN IDENTIFYING THESE SPECIMENS.

HIGHLIGHTS OF THE JANUARY MEETING

Carl had on display a number of cones that he had collected, and that illustrrate the range of color and pattern variation within their species. They were Conus gubernator, kinoshitai, imperialis, victor, wittigi, leemani, barthelemyi, gaugini, natalis and gilchristi. He believes the last to be a color form of natalis. He also doubts certain other cone identifications, in light of his knowledge of the appearance of the animal and of localities.

Ed Cowles passed around a copy of the Forbes Annual Product Guide. The feature article, by Stephen Wolfram, is titled "This Seashell May Hold the Secret of Stock Market Behavior." The shell is Conus textilis, and it is the cover photograph of the issue.

HIGHLIGHTS OF THE FEBRUARY MEETING

It was announced that the Museum's exhibit "Mollusks and our World" (Originally named "Mollusks and Mankind" would close at the end of March. A display of mollusks will be part of the redesigned Hall of Ocean Life.

The program for the day was grunge picking, which kept everyone happily occupied for more than two hours. The dredged material came from Macten Island, Cebu, P.I.

The door prize was Lambis chiragra, won by Phil Tate; Chione latilirata, won by Irv Hoppenwasser; and Bufonaria nana, won by Al Scarpetti.

HIGHLIGHTS OF THE MARCH MEETING

The speaker was Mickey Cohen, who is well remembered for his two past presentations. Mickey is Manager of Bayswater State Park in Far Rockaway, Queens. His subject was the shifting sands of the city's shoreline. The line changes continually, receding and advancing to achieve a near-balance. However, as he showed with slide photographs, storms frequently carry beaches out to sea, spoiling many a hoped-for day at the beach until expensive replenishment restores the

sand. Much worse, many shorefront homes and businesses disappear wth the sand in the worst storms.

Mickey's photos also showed how groins and jetties are good-news, bad-news efforts at protection. They do hold and accumulate sand on their windward, or east, sides, but deprive the beaches on the downwind side. In winter, winds moving freely over hundreds or thousands of miles of ocean create huge waves that stir up beach sand and carry it seaward. The waves are so close together that the sand can't settle until it is far offshore. In summer, the gentler waves carry sand back toward shore, but this is less than what was lost. The result is to gradually erode east-facing shores and extend west-facing ones.

Montauk lighthouse, at the east end of Long Island's south fork, was built 100 yards from the tip of the Island. Before long it was seen that this margin of safety was disappearing. It took a lot of boulders, traprock and scrap iron to stop the erosion. The long east-west stretches of the city's shore are a difficult, and continual challenge.

Mickey noted that Long Island and surrounding areas are new--less than 12,000 years old. They acquired their surface rocks and soil, and their shapes, and in some cases their existence, from the deposits left by the last glacier of the ice age. He also showed in photos of maps made in the 17th and 18th centuries that showed how it took explorers a while to discover and determine the shape of such prominent features as the Rockaway peninsula. Later, more accurate maps showed certain shores to be farther east than they are today. Mickey also commented on the implications of a rising sea level.

New members Sandy Kay and Laura Smith were introduced.

The door prizes were Conus arenatus, won by Sandy Kay and Cyprea lynx won by Ed Cowles.

WORLD'S GREATEST SHELL COLLECTOR

BY HENRY S. GORDON

Let me introduce you to Nicolaos Apostolou, born in 1909 in Episkopio, Orinis, Nicosia, Cyprus. "Who's that? you ask. Why, Nick Katsaras, of course. Historian of our own New York Shell Club, presenter of the famous Katsaras shell auctions of the late 1950's and 1960's, contributor to the New York Shell Club Notes, and correspondent with shell dealers, other collectors and shell scientists all over the world. (What a fantastic stamp collection he must have had along wth his spectacular shells.)

Nick says he never even saw the ocean surrounding his island home until the day in 1930 when he set sail for America "to find gold or whatever." He lived at first in New York City, working in a restaurant, , and then in Babylon, Long Island A friend who had a shoe repair shop in Bergenfield, New Jersey, induced Nick to become a cobbler, and after some period of apprenticeship, Nick found himself

owning a shoe repair shop, which he ran from 1934-1941. He was drafted into the Air Force and spent three years in service, going over in a troopship with 7,000 via Australia, and ending up in Bombay, India. (Ask Nick about what a monsoon is like.) Placed on "overseas" shipment for the invasion of Japan, Nick was spared that when the news came of the dropping of the first atomic bomb.

After WWII, Nick bought a shoe repair store in Teaneck, N.J., and resumed his live as a cobbler, working at his last until 1981, when he retired.

In the 1950's, Nick was fond of taking his day off to visit the Museum Shop of the American Museum of Natural History in New York City, where there were seashells for sale. One fateful day for Nick - and really for all of us who love beautiful shells - was when he saw in the Museum Shop a notice from the newly formed New York Shell Club, seeking members. The Club had held maybe three or four sessions. Nick went to the next, and since then has missed few meetings-- a truly remarkable record!!

Who hasn't heard about the Katsaras auctions. On October 5, 1958, probably well influenced by the famed Buttonwood Shell Auctions that took place outside of Philadelphia, as well as the New York Shell Club auctions, Nick held the first one-collector seashell auction in New York City in , I think, 50 years. I was reading The New York Times that Sunday morning and saw in it that a Bergenfield, N. J., cobbler was presenting a shell auction. Having not a half-year earlier broken a promise that I would never buy a shell, I quickly dressed and raced into Manhattan. There at the National Arts Club at Grammercy Park, I entered a long, narrow, well-lit basement room to revel at hundreds upon hundreds of "gem " quality specimen shells (and I do mean gem quality).

At this first Katsaras auction, I gorged on spectacular olive shells in particular. I seem to remember that I bought about 70 shells for $ 17; the next year, when my interest shifted to cones, it was about 17 shells for $70. This started my shell buying in earnest.

Now even though Nick wasn't the official auctioneer at his auctions (the New York Shell Club's Tony D'Attilio handled practically all of the early ones), he surely wasn't a silent presence. Comments galore flew from him all over the room. Hardly a shell went by that didn't get some remark attached to it - as to rarity, location, quality, history, etc. Remarks delivered by a consummate showman, even if unaware of his talent that way. I know that malacologists are mostly scornful of lay conchologists, belittling the latter's enthusiasm. But with Nick , I often wondered, on a lengthy seashell quiz, who would get an A, and who the lesser grade?

What more can I say? Nick Katsaras is opinionated to an extreme, yes - even cantankerous. But he is also lovable , generous with the New York Shell Club to a fault, and supremely fascinating. There is only one Nick Katsaras in the world of shell collecting. Who could ever hope to clone such a one-of-a-kind!

P.S. I don't know of a single shell named for Nick. Isn't it about time?

CONUS GLORIAMARIS -- WHAT A DIFFERENCE A FEW DECADES CAN MAKE?

The recent purchase of a Conus gloriamaris at the Annual New York Shell Club Auction for the princely sum of $ 36 dollars caused us to reprint an article that first appeared in New York Shell Club Notes volume No. 9 of November, 1954 on the rarity of Conus gloriamaris:

The occasion of the recent sale of a specimen of this rarest of species in New York recently, caused all members of the Club to become interested in this cone. We therefore thought that some notes might prove interesting.

In our library we came across two articles dealing with gloriamaris, one by R.W. Miner in the July, 1922 issue of Natural History Magazine. In this paper appears the story of the student of cones Hwass who was supposed to have said, after bidding high for a specimen and then proceeding to crush it under his heel, " Now I possess the only specimen in the world!"

We have all read a similar story of a stamp collector who was said to have destroyed a rare Mauritius. We should like very much to see the man who can "crush" a cone under his heel. Try it and see. Miner also states that the poison teeth of a conus " are used for biting prey or as a drill to penetrate its shell." We know of no other statement that gives this power of drilling to cone shells . We may be permitted to doubt another statement to the effect that "the range of the species is very limited and the species is doubtless extinct." The other article is by W. E. Ankel which appeared in the ARCHIV FUR MOLLUSKENKUND, April, 1951. In this article, which was written upon the discovery of a hitherto unknown specimen in the bombed-out museum of Darmstadt, Germany the author shows that the species has been collected in areas 2500 km (about 2000 miles) apart and that in all probability it is a shallow-water coral reef species. Its rarity he ascribes to our ignorance regarding its ecological requirements. Who knows, perhaps at this very moment the rare cone is being collected by people who are not aware of its value.
M. Karl Jacobson

RARE TODAY

Back when Strombus listeri was the "Be the first one on your block..." species, a dealer sent one to an AMU convention to be auctioned at a social session. It was billed as the only one in the country and the upset price was $1000. There were many potential bidders in the seats, but the dealer's cross-hairs were on one. The target bid the thousand and wasn't challenged.

A year and a quarter later the successful bidder attended one of Nick Katsaras' well remembered auctions and acquired his second listeri for $47. The wet collectors obviously, were learning listeri's habits and habitats, and it entered the pipeline. Veronica Johns for example was soon selling them in her Manhattan shell shop Seashells Unlimited, priced by size--$10 and $15.
(ED.)

8168 JANTHINA

BY ETHELYN WOODLOCK

My shelling days started back in 1950 but my most memorable sight during all of these years was a purple beach at Ft. Lauderdale.

The lifeguards whistled at me: "They are poisonous, be careful--"
"I know , but I am jumping over them. I must pick up as many purple snails as possible before the seagulls eat them."

In March, with a strong east wind, the high tide waves bring in the Portuguese Man-of-War, balloon like creatures with long poisonous streamers. The Janthina wash in with the blue balloons so that the beach is literally painted purple, an unforgetable sight. I was fortunate enough to be there three different years, three years apart, to enjoy this rare occasion: 1961, 1964, 1967.

As the tide receded, the shells would be gone, while the balloons shriveled and dried, waiting for the beach clean-up wagon. In a few days, the beach was back to normal coloring, but I would be cleaning those purple snails for the next month.

Each year netted me nearly three thousand shells. Many broke in cleaning, but the final count for the jars filled with all sizes and types was 8,168. Has anyone ever cleaned that many before? The jars have purple lids that match the color of the beautiful, fragile shells. With thousands cleaned, I kept only one with its raft of bubbles. The shell is pelagic (floating) and rides the waves with the bubbles. It must be quite a sight to be in a boat surrounded by a purple ocean; fishermen say it is.

The Janthina went into a foot tub filled with water where they soaked overnight. The next day was spent behind the cottage, shooing away flies, while I gave each "raft" a twist with tweezers and carefully pulled the animal. When it was on the scrap heap, each animal looked exactly like the shell. I had to be so careful that the tiny tip was there. If it broke off inside the shell had to soak and have the water changed daily for perhaps a month before the tip would flush out of the shell.

My first batch was packed in tissue. I wrapped each one before I gently lowered it into a tall square cracker tin, for the long auto ride to New Jersey in the spring.

One time something told me to look in the tins in the car trunk, and as I took off one cover, these horrible white maggots had filled the tin. I do not mind cleaning shells or the bad odors but I simply hate those white things. I seem to squirm right along with them. I dumped the whole tin in the foot tub and those creatures swam for hours in Clorox, ammonia and detergent. Nothing seemed to kill them. It was days before I could repack the tin, and guess what happened to that one shell with the tiny piece left inside that had caused all of the trouble? I was so mad at it, I pitched it! No more shell. Poor thing, it was my fault, not its.

With such a penchant for counting things, it's a wonder I didn't count the numbers of types. Janthina janthina Linne, 1758 would have been the largest count, and they are the largest shells, one and a half inches in diameter. But I also have them so small they can hardly be measured. Some of the jars are all Janintha globosa Swainson, 1822-- longer, all violet and glossier. J. pallida Thompson, 1840 is lighter in color and fatter. One tiny baby is actually pink, noticeably different from the pale lavender. There are many of the smallest type J. exigua Lamarck, 1816.

The wee ones were put in jars of warm water on the window ledge over the sink and as the water clouded, they were gently rotated and given fresh water to "spoil." It took weeks before the water stayed clear. I finally learned to hold each shell in front of a light, like candling an egg, to check for a cleaned shell. Wish I had known this before those maggots! It takes a long time to learn so many things.

My Janthina have been shared with friends and exchanged for shells with many dealers over the years. And just this moment I had the great idea for next year's shell show- umpteen feet of rows of Janthina in graduated sizes and colors would be a sight to behold! At one time I had 400 of the largest ones in a case and Gordon Melvin said it was the most beautiful sight he had ever seen. As an artist, I use and like all colors, yet I have said many times, " I like any color as long as it's purple." Once upon a time there were eight thousand purple snails.

Over the last twenty years Ethelyn has entered exhibits in Florida shell shows, displaying a wide range of themes and genera. Some exhibits were creations of her skill at shellcraft, and she has served as a judge in this category. She has earned 30 firsts, many Seconds and Thirds, and 8 Judge's special awards.

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FOUNDED JAN. 1949

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MEETING DATES 2001

SEPTEMBER 9
OCTOBER 14
NOVEMBER 3
DECEMBER 9

Events for the next three meetings are included in this edition.

WHERE WE MEET

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On our meeting days, you may enter the Museum without paying the Museum's admission fee by presenting your New York Shell Club card.

COMING EVENTS

September 9--- " Land Snails of Jamaica" Dr. Gary Rosenberg, the Curator of the Department of Malacology at the Academy of Natural sciences of Philadelphia , has had an interest in the land mollusks of Jamaica since graduate school, and has made many scientific trips to Jamaica while pursuing his specialty. Jamaica has 550 known species of land snails and an estimated 10-20% still not yet named. Its central karst area includes the world's highest diversity site with over 90 species in an area the size of a city block. Please join us for Dr. Rosenberg's informative presentation on this island's rich endowment of terrestrial mollusks.

OCTOBER 14--- "Shelling in Brazil" Mel Springer, President of the Long Island Shell Club, has been a enthusiastic mollusc collector for most of his life, and has traveled extensively to exotic locations in pursuit of his passion. He recently traveled to the northeastern coast of Brazil, an area not generally frequented by collectors. Please join us for an interesting presentation on his findings.

November 3---The Philadelphia Shell Show This event is one of the season's highlights, with beautiful and informative exhibits and a chance to purchase beautiful specimens, ranging from the common to the rare, from a large selection displayed by many dealers. The Club is organizing a car pool to take interested parties. Cars leave New York early in the morning. the trip takes two hours and we allow enough time for all to enjoy the exhibits and tour the dealers. We are back in New York between five and six in the evening. If interested call Carl Ehrlich at 212-675-7601 or Charles Whitman at 212-861-8211. Space will be alloted on a first-come first- served basis, as it is limited.

HIGHLIGHTS OF THE APRIL MEETING

The annual New York Shell Club Auction was held at Dorothy Jensen's Broadway Dance Studio in Astoria, Queens on Sunday. April 8, 2001. The doors opened at 11 a.m. and the auction started at 1:00 p.m.. Of the the more than 160 shells and related items offered, the highest interest was generated by:

Notopeplum translucidum	$100
Pleurotomaria hirasei	100
Conus	55
Conus wittigi	50
Cypraea coronata	40
Conus gloriamaris	36
Cypraea coronata	40
Mitra collection, Solomons	28
2 land shells: Porphyrobapha iostoma Auris illheocola	28
Cypraea fuscorubra (large)	23

Romuald Czepulkowski served as auctioneer, with the assistance of Carl Ehrlich. The runner was Larry Potter, and Charlie Whitman manned the teller's desk.

The door prizes were three shell books, and the raffle prize was a framed painting of a shell.

Business was brisk at the sale and bargain tables, and at the book table. The refreshments were wine, punch, coffee, cake, cheese, crackers and pizza.

HIGHLIGHTS OF THE MAY MEETING

Romuald Czepulkowski, referring to Mickey Cohen's presentation at the March meeting, noted that sands from North Carolina have been brought to Long Island's shores to fill in eroded areas of beaches. Along with the sand came some shells that caused surprise among collectors who did not know of the replenishment effort.

The speaker was Carl, whose subject was miters that he had collected. He had on display several hundred specimens. His introduction was, "What we will do today is help me to identify some of these specimens." Leaving this concern for later, he went on to note that miters are sand dwellers, found at depths of 275 feet. The best time for collecting them is at night when there is no moon. He said that some species are carnivorous, at which Romuald said that most are. Carl said that mitriform gastropods are now arranged in four families: Mitridae, Costellaridae, Volutomitridae and Pleioptygmidae.

Carl recalled having collected vicdani before it was named, off Madang, Papua New Guinea, at 120 feet. He later collected one at 175 feet on the second deck of a WW II wreck in Iron Bottom Bay in the Solomons.

Carl also commented on the literature generated by studies of the family, and on the disagreements among investigators in an area where differentiation can be extremely difficult. The literature on hand helped in several joint efforts that provided Carl with some identifications.

The door prizes were Acanthina lugubris angelica, won by Phil Tate; Conus generalis, won by Laura Smith, and a Cochlostyla sp., P.I., won by Ed Cowles.

ONE GONE, ONE COMING: MOLLUSCAN EXHIBITS AT THE AMNH

The closing of the exhibit Mollusks and Our World (originally Mollusks and Mankind) was an administrative decision that caused disappointment to many shell enthusiasts here at AMNH and elsewhere. Nevertheless, as Dr.Joseph Rosewater (the late Curator of Mollusks at the Smithsonian) once wrote; a finished museum is a dead museum. We must all realize that the mollusk hall saw limited visitation relative to other AMNH exhibits, was comparatively static in its approach, yet had a very fair run of 26 years since its opening in 1975. Museums must constantly strive to change and refresh their exhibits to keep the public interested, and in my experience, most permanent exhibits are scientifically relevant for no longer than 15 years. I am personally co-curating the renovation of the Hall of Ocean Life and will be directly responsible for the molluscan content of the hall (as well as that for all other marine invertebrates and plants). I cannot now describe in detail what the exact molluscan components will be because many of the plans are still in flux, however I can guarantee that mollusks will be highlighted in many areas. An evolutionary tree of invertebrates will of course include Mollusca, as will a series of detailed ecological treatments (e.g., mangroves, coral reefs, deep sea, etc.). Mollusks will also serve as the model to show how invertebrate anatomy and physiology differ from those of the more familiar invertebrates. I am sure that the result will be both a valuable teaching tool and a fascinating visual experience. The current estimate is that the renovated hall will be unveiled in May 2003.

I would also like to announce to your club members that a special exhibit on Pearls, for which I am also co-curator , will open at the American Museum of Natural History on October 13, 2001. It will remain open through April 2002, then will travel to the Field Museum in Chicago for another six-month run from June 2002 to January 2003. Obviously this exhibit will highlight mollusks and the many-varied pearls that they will create. It will cover all aspects of pearls biology, geography, minerology, anthropology, aquaculture, and of course, gemalogy. I am sure that your members will enjoy what promises to be one of our most glamorous shows. Watch also for publication in October of our accompanying book, Pearls: A Natural History, by Landman, Mikkelsen, Bieler, and Bronson, Harry N. Abrams, New York,

Dr. Paula Mikkelsen, Curator of Malacology
Div. of Invertebrate Zoology, AMNH

THE ORIGINS OF GENERIC NAMES

(FROM NYSC NOTES, NO. 4, MARCH 1951)

During the course of my meanderings in conchology, I have often wondered how and why certain genera got their names. I have always considered the name of a shell as of quite some importance and interest. In fact when I sometimes see a little old shell about 1/2 inch long with a name 2 or 3 inches long, I wonder which is more important-- the name or the shell.

Many genera of shells are named because of their resemblance to certain tangible objects. For example, PYRULA means a small pear, MALEA an apple, RAPA a turnip, CEPOLIS an onion, MELA-PIUM, which means apple-pear and looks like both, MELO a melon, and MICROMELO a tiny melon. Some genera are named for the color of the shells: such as the JANTHINA violet, ATRINA blackish, SUCCINEA amber, and MELANIA black. However, there is a genus named MELANELLA, the shells of which are all pure white. In this case, the name was given because the shell resembles the MELANIA in shape but not in color. The razor clams have fairly logical derivations. SOLEN means razor, ENSIS sword, and CULTELLUS knife. There is a genus named NOVACULINA which means new face. Now one thing that makes a new face is a razor, so as the clam is razor-shaped, we have the name MALLEUS means hammer and TUDICULA small mallet.

The genus STOMATIA means mouth. From this root name we have STOMATELLA, which means little mouth, ODOSTOMIA tooth-mouth, CALLIOSTOMA beautiful mouth, CHLOROSTOMA green mouth, CHRYSOSTOMA gold mouth, TEINOSTOMA spread mouth, MEGALASTOMA large -edged mouth. From the “window glass shells”we have PLACUNA, a thin cake. AMPHIDROMUS means running both ways (ed. note: because the shells are either sinistral or dextral) and LIGUUS surrounded by bands. EULIMA means well polished, FARCIMEN sausage, GYRAULUS circular tube, HIPPONYX horse’s foot, HELIX spiral, BUILIMULUS hungry, PATELLA knee cap, PERNA ham, PHYSA inflated, and TAPES tapestry. From “pleuro” we get PLEURODONTA side-toothed, PLEUROCERA side-horn, and PLEUROTOMARIA side-notched. TORNATINA means turned on a lathe, PUSTULARIA blistered. TECTARIUS means roof; PUPA, PILLA, PUPINA and PUPINELLA all mean doll, and TURITELLA little turret. Archimedes is said to have gotten the idea of the screw from this shell. TURBO means top, PILA and AMPULLARIA both mean ball and POLYGYRA means many windings. The genus UNIO, credited to Retzius in 1788, means pearl. The name was first used however by a pupil of his, and due to the laws then in force in the University of Lund, Sweden, the credit was given to his teacher Retzius and not to the student, whose name was Philipsson.

A great number of shells are named for mythological deities such as NEPTUNEA, from Neptune, and TRITON son of Neptune, IO paramour of Jove, ATYS son of Hercules and so on. CYPR AEA, VENUS, LUCINA, PAPHIA, ASTARTE, CYTHEREA, CYPRINA and VENERUPSIS are all names of the goddess of love.

Among genera named in honor of certain personages are COOKIA named for Capt. Cook, CUMINGIA for Hugh Cuming, RISSOA and RISSOINA for Risso, and so on. Two genera are named for women: KATHARINA for Lady Katherine Douglas and YOLDIA, named by Muller in 1842, for the Countess Yoldi.

The last group I would like to mention consists of genera whose names mean nothing at all. The names were invented by their authors because they thought them euphonious. Examples are: IOAS, ARCOPAGIA, ZIRPHAEA, TIVELA, BARNEA and ASSIMINEA. Perhaps the most outstanding exponent of this form of nomenclature was the English scientist Gray, who named the followng: ALCADIA, BITTIUM, DRILLIA, ENGINA, EUTHRIA, LOTTIA, LUCAPINA, MOPALIA, RISELAS, STANDELIA AND TAGELUS. Although some sound very scientific, all mean absolutely nothing. So you see, when it comes to the naming of the genera of shells, you never can tell.

ANCIENT CORALS MAY HINT OF WORSENING EL NINO CYCLE

A PARTIAL CLIMATE CHRONOLOGY IS DISCOVERED

BY ANDREW REVKIN (NY TIMES - JANUARY 26, 2001)

Reading chemical clues etched in coral up to 130,000 years old, geologists say it appears that El Nino and La Nina, the pulses of warm water and cool Pacific waters that can lead to Indonesian droughts and Idaho blizzards, have almost never before reached the sustained intensity seen in the past century.

The research also shows that the swings in Pacific temperatures tend to increase in warmer times- like now- but weakened by as much as 50% during the protracted cold of the last ice age.

The scientists say their findings provide a hint , but only a hint, that additional global warming could further intensify the cycle, the El Nino-Southern Oscillation, or ENSO, and thus bring more bouts of destructive weather. The cycle is one of the dominant forces shaping year-to-year storm and precipitation patterns.

The ENSO cycle is important because of the great reach and consequence of the destructive weather it leads to.

El Nino, the giant patch of unusually warm water, can persist for several years, disrupting fisheries in the eastern Pacific, producing sustained rough weather along the West Coast of the United States and causing harsh droughts in places in Indonesia, which several years ago battled enormous wildfires resulting from El Nino.

La Nina, the cold variant, typically drives a relentless freight train of bad winter storms that hit the Pacific Northwest and then rumble east across the northern states, while hot, dry summertime spells settle in the West.

A La Nina event is under way and is expected to fade in a few months, federal officials say. A new cycle is inevitable but its timing and strength are largely unpredictable.

Dr. David W. Lea, an author of the study and a geology professor at the University of California at Santa Barbara, said the coral data should help improve computer models used to try to predict future ENSO cycles and global climate.

To divine the cycles of the past, the researchers zeroed in on fossil reefs and living ones in eastern Papua New Guinea, where the climate is strongly influenced by the Pacific temperature shifts. Corals record changes in local rainfall and temperature as subtle variations in the ratio of two isotopes of oxygen incorporated in their calcium carbonate skeletons. Cores are drilled through boulder-size corals and successive thin slices reveal the change in oxygen composistion and climate back in time.

A challenge for climate sleuths has been to find a place holding a series of corals dating back into and beyond the last ice age, when sea levels were more than 300 feet lower than they are now because so much water was locked in glacial ice.

Normally, such fossils would be deep underwater, but the geologically active part of New Guinea where the team collected its samples has been rising from the sea at a fast pace, exposing ancient reefs that would otherwise be nearly impossible to find.

To collect a record ot the last 100 or so years, the scientist donned scuba gear and drilled cores from living boulder corals. It was those samples that showed the most sustained period of sharp temperature shifts of all -- 120 years long.

There were two previous peaks of ENSO activity that were as strong, but each lasted only a few years, according to the study.

The researchers speculate that the recent sustained ENSO period may be the result of two influences superimposed on each other: today's warm climate and a variation in Earth's orbit that tends to weaken westerly trade winds in the Pacific.

When the winds diminish, the warm pool of El Nino waters has an easier time spreading eastward and changing weather patterns, the researcher said.

For the moment that remains a theory, Dr. Tudhope said. The best way to answer such questions, and to get an inkling of coming cycles, he said, is to go back and try to fill in the blanks that still dominate the calendar of climates past.

LITERARY NOTE

Mark Twain was never at a loss for words in dealing with any topic. In answering a correspondent who wanted to know the difference between geometry and conchology--- MT always got this type of question--he writes as follows: “Conchology..... relates only to shells. At the same time, however, a man who opens oysters for a hotel, or shells a fortified town, or sucks eggs, is not strictly speaking, a conchologist---a fine stroke of sarcasm that, but it will be lost on such an unintellectual clam as you.” Have we here a retort for our detractors who think us all mad?

ETHELYN HURD WOODLOCK

May 13, 2001

Ethelyn moved to Largo, Florida in 1979, but is well remembered here for her engaging personality, her lively interest in shelling and shellcraft, and her high accomplishments in her career as an artist. She loved to incorporate elements of symbolism and illusion in her paintings, and to find a strategic place to add an eye.

In Ethelyn’s New Jersey home her large shell collection was housed in a room that she turned into an “undersea” habitat by painting the ceiling blue and mounting the bottom of a rowboat against it .The oar tips appeared at the appropriate angle and places. That imaginative spirit certainly contributed much to extending her life of happy activity to within less than a month of her 94 th birthday.

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MEETING DATES 2001-2002

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card.

COMING EVENTS

DECEMBER 9--- DON RIEPE OF THE AMERICAN LITTORAL SOCIETY WILL SPEAK TO US ON "THE WILDLIFE OF NEW YORK CITY AND JAMAICA BAY". PLEASE JOIN US AS DON ENLIGHTENS US ON THE VARIED WILDLIFE THAT EXISTS EVEN IN OUR DENSELY POPULATED CITY.

JANUARY 13 --- ANNUAL MEMBER SHELL EXCHANGE.

HIGHLIGHTS OF THE JUNE MEETING

President Carl Ehrlich introduced Susan Hewitt, who was attending only her second meeting, but would be the speaker for the day. He noted that Jay Cordeiro would leave the museum to take a position at the Nature Conservancy in Boston. Charlie Whitman drew attention to a letter to him from Ethelyn Woodlock's daughter , Mary Ann Johnston, informing us that Ethelyn had died in May.

Ed Cowles made the motion that we buy a sound system for the use of our speakers . The motion was approved , and Carl said the he would buy one.

Susan Hewitt opened her presentation by saying that she has been a compulsive shell picker-upper for many years, first in her native Britain and then California.. She first visited Nevis, in the Caribbean, in 1997. Her activities there and at neighboring St. Kitts were the theme of her talk, illustrated with a photo album and a map of the Caribbean and of its faunal zones. She noted that the attractions of Nevis are accessible at half price after April 15. She had the good fortune to be there shortly after the departure of Hurricane Lenny, which like no other before it came in from the west. It caused much erosion but left behind a windrow of shells three feet deep. Her pickings sorted out to 167 species. Her examination of the collections of local people extended the list to about 250. These data are almost the first on the marine shells of the two islands. She will go there again, and plans to publish her findings. Many of the shells, some unidentified, will go to the American Museum.

On display were the three identification books she used, and a bibliography of Caribbean malacology by Mikkelsen, Bieler and Petit. Susan also showed a blank book with waterproof pages for making notes and labels.

For the Nominating Committee, Ed Cowles presented a slate of incumbent officers and directors. The Secretary was empowered to cast one vote for the entire slate.

The door prizes were Murex Radix, won by Larry Potter; Latiaxis pagoda, won by Charlie Whitman, and Architectonica Nobilis, won by E Cowles.

HIGHLIGHTS OF THE SEPTEMBER MEETING

President Carl Ehrlich announced the death of Nick Katsaras on July 5. He has talked at length, by phone, to one of Nick's nieces, and plans to meet her. It is hoped that she has the Club's historical archive. which Nick has assembled over the years. Romuald Czpeulkowski reminded that there is some historical material stored in Carl's warehouse.

Carl had on display three shells of special interest from Bohol, P.I. that he had collected: Cypraea mappa, strongly granulated; Murex scorpio, albino, and a cone that he thinks is either a mutation or a new species. Romuald showed two shells from Bohol: Annulaturris muniz and Drillia tasconium. From Mactan Island, Cebu, he had a Mitromorpha philippinensis, Mitsud 2001.

The speaker was Dr. Gary Rosenberg of the Academy of Natural Sciences of Philadelphia. His subject was his continuing survey of the land snails of Jamaica. He has observed and collected there for 15 years, now with funding from the National Science Foundation. He will contune his survey in November.

He noted that Jamaica emerged from the sea about 15 million years ago, and is mostly limestone. It is about the size of New Jersey and supports 556 species of terrestrials, 501 endemic. He said more will be named. His slides of maps showed elevations and rainfall. Scenic views showed the lush vegetation and an area that is almost desert, and others showed the contrasts between old and second-growth forests and the effects of mining, clearing and other activities.

Among high = density collecting areas is one in which he found 90 species in the space of about 10 acres. Shell slides showed something of the great variability and beauty of Jamaica's land shells.

Gary ended with a culinary warning. Ingesting a worm that lurks in vegetables in Jamaica results in meningoencephalitis. It's a disease as bad as it sounds = = debilitating and often fatal. If you find yourself cooking in Jamaica, wash your vegetables.

The door prizes where Mitra papilio, won by Irv Hoppenwasser: Cypraea lynx, won by Charlie Whitman, and Corculum cardissa, won by Sandy Kay.

RETIREMENT, EMERSON STYLE

Dr. William K. Emerson retired several years ago as the head of the Department of Invertebrates, American Museum of Natural History. As it frequently happens in the scientific community, he relinquished his title and administrative duties, but not his place in the discipline. He continues his contributions to conchology in an office in the museum. In response to a request for information on his current work he replied with the following:

I am presently working on a zoogeographic review of the 37 species of Conidae living in the eastern Pacific Ocean, 33 Panamic species (including three insular endemics), three Indo-Pacific species, and one Californian species. The records of additional conid taxa are discussed and rejected. The distribution in time and space of the 37 species is delineated for the eastern Pacific oceanic islands (Clipperton Island, the Revillagigedo Islands and the Galapagos Islands) and the west American Continental Borderland. Of the 33 Panamic species, 10 taxa are known only from the mainland coastal region , whereas 21 of the Panamic taxa occur both on the mainland and on some of the oceanic islands. Of the Panamic insular endemics, two occur on Cocos Island and one in the Galapagos Islands. In contrast, all three of the Indo-Pacific species are known from the mainland and two of the three taxa are reported from all of the oceanic islands. The sole Californian species is restricted in distribution to coastal mainland waters. The Panamic faunal elements and the Californian species are well represented in the regional fossil record (Plio-Pleistocene), whereas the Indo-Pacific taxa are known only from the recent fauna in the eastern Pacific Ocean.

OUR MAN WITH ITCHY FINS

How often do you jet off to the Solomon Islands to do some shelling? Carl Ehrlich has done it ten times - and the list of other remote places he has ventured to is dizzying. Shelling wasn't the original inspiration for this agreeable habit, but it is now. The result is a collection that combines dazzling beauty with scientific significance = = extension of known habitats, size records, a wider window of variability and very possibly a new species or two.

Carl's life has been, in a variety of ways, a matter of journeying. From being a poor kid he became owner and operator of a business he started. As a kid he indulged an interest in nature, especially animals, with barefoot safaris into wooded areas near his home in Staten Island, N.Y. These neighborhood forays evolved into snorkel and scuba adventures all over the world, as his interest in wild life evolved into a fascination with shells.

The object of the boyhood ventures was to bring home any kind of reptile or mammal he could catch, and his patience and resourcefulness made him good at it. Stage 2 was to acquire an understanding of his new pets by treating them gently so they would calm down , relax and behave according to their natures. Having delved into their varying psyches, the young scientist returned his subjecrts to their habitats. At the improbable age of 12 he became the temporary proprietor of a great blue heron.

It wasn't until he was 28 that Carl scraped together enough money to realize a dream -- to play Frank "Bring 'em Back Alive" Buck in Africa. In Kenya, Uganda and Tanganyika he caught snakes, lizards, crocodiles and other reasonably small fauna. Unlike Buck he didn't sell 'em, he released 'em. He's been back to Africa three more times.

Long before the later Africa trips Carl had discovered shells, and he punctuated those trips with jaunts to far-off elsewheres. An early choice was Papua New Guinea, where he mixed diving with visits to some of the famously primitive highland tribes. A jungle trek took him to the ghost of a Japanese air base, complete with riddled aircraft. On a flight to Madang his plane landed at an "airport" -- clear strip and shack -- that he thought was Madang. When the kite left with his luggage he was busy exploring. Four hours later he had found someone who connected him with a non-sked pilot who reunited him with his wordly goods. The marine shelling was great, and he has been back to New Guinea twice.

Australia has been a five-time destination. One of his west coast stops was Onslow, with 40-foot tides. The currents are too strong for diving, so he snorkeled in tide pools. He shelled in the Galapagos 35 years ago, when there were no restrictions. He went from island to island in a small fishing boat skippered by a young man he ran into at the water's edge. They slept on deck. As always, he left the flora and fauna in good condition

It's been many years since Carl was a lone adventurer. Now there's his wife, Denise, to share the difficulties and delights. She has the curiosity, enthusiam and stamina to keep up with him, and down with him on dives as deep as 240 feet. Her growing conchological know-how contributes to the success of their efforts, and Carl says she's the one who makes the great finds. Among the onshore delights were the lemurs of Madagascar, which are willing to drape themselves on nosy visitors. The tiny saucer-eyed tarsiers of Bohol, P.I. submitted with good grace to being treated as soft furry handfuls.

A memorable stop was Sao Tome off west Africa. It took months to learn that it could be reached and to find a way to do it. The Ehrlichs were the first American tourists to set foot. The American ambassador to Gabon went along and stayed for the whole trip, perhaps because he was afraid one or both might be of the journalistic persuasion. It seems the two owners of the island were running guns to Africa -- maybe Angola. At the time, about 15 years, they were the de facto government of the island.

Both Carl and Denise have a capacity for making friends, and they have many around the world. Carl chose the Solomons as a goal early on because he wanted to meet Brian Bailey, master sheller and master diver. They're close friends, and have met many times in many places. It was Carl's pervasive spirit of inquiry that moved him to seek out Richard Leakey in Africa.

It was a yen to collect Conus cedonulli that sent him to St. Vincent. Other stops in the area have been Panama, Venezuela, Trinidad and Tobago, Martinique, Puerto Rico, Eleuthera and the Isles of Pines (during a typhoon). In the Indian Ocean, Madagascar, the Maldives and Seychelles. In the Pacific: Fiji, Tahiti, the Marquesas,

Hawaii and Vanuata(formerly New Hebrides) and New Caledonia, surviving a typhoon on the adjacent Isle of Pines.

Among the half-dozen possibly record-size specimens that vie for space in the Ehrlich's Manhattan aerie are : Epitonium edgari, 145 mm ; Conus imperialis 104 mm. C. luteus, 66 mm; C. boeticus, 44 mm. Among the many Conus gloriamaris Carl has collected are tiny ones, from an entire population of dwarfs that he found off Kolumbangara, the Solomons. A notable extension of range was his discovery of Conus bengalensis off Flores is eastern Indonesia. These are a bit shorter and stouter than Bay of Bengal specimens. Carl has collected Chicoreus zululandensis, named in 1989, off Madagascar, along with C. triplex cloveri, named in 1985.

One of the albinos he has come back with is Cymbiola rutila, and he knows of no other like it. Melanistic specimens include Cypraea mappa, eglantina, scurra, stolida, teres, arabica and cribraria. There is also, as P.T. Barnum might advertise it, a congress of freaks. Rarities are the volute Harpeola anna and Conus marielae.

The demands of running a business didn't hobble Carl's itchy fins, and neither did adding the daunting responsibilities that come with the presidency of the New York Shell Club. At this writing, the stirring in his questing soul is inspired by Darwin. Not Charles -- the one near the top of Australia. The smart money says he'll give in and head down.

HOW TO CATCH A GREAT BLUE HERON

It is recognized by most of the staff of Shell Notes that herons have no shells == are, in fact, not even mollusks, but more birds. But there may be bird watchers lurking in our readership (two were apprehended in the New York Shell Club). On the chance that any such might be ready to get real and switch from to watching to catching, here is the tried and proved Staten Island modus operandi :

Bicycle near a lake till you spot your quarry at a distance from the water and with a big brushy wooded area beyond it. Interpose self between Big Blue and its aqueous sanctuary. Hop off bike and charge. Heron flees into woods and gets tangled in brush. Overwhelm it, being careful to get a good hold on beak.

Having proved the effectiveness of this method, Carl pedalled home with his squawking, writhing, flapping, flailing prize wedged in his lap. He walked into the house, desperately clutching the blue berserker, and for his mother it was the last straw. His recollection suggests that she put on a creditable imitation of the outraged trophy, and after a night in the pigeon coop it was returned to the lake. Before emulating the sub-teen Nimrod, it would probably be well to consider the likely reactions of those near and dear.

NICK KATSARAS
1909 - 2001

With the passing of Nick Katsaras the Club has lost its longest tie to the past. Nick joined the Club at its second meeting, in February, 1949, and for a half a century, or close to it , never missed a meeting. It was only in very recent years that he occasionally failed to make the trek from New Jersey = = probably three or four times. He was, appropriately, our historian.

Nick died on July 5, hospitalized by liver disease. We have lost a valuable member and a good friend. Meetings won't be the same without this link who was almost never missing.

Henry Gordon's appreciation of Nick, as a figure in the international shell world and as person, can be found in our issue no. 358, March 2001. It's recommended reading.

STILL TUSSLING WITH WORMS

Cromwell Recreation Center (Staten Island) is the only city parks center sitting on a New York harbor pier. This makes for nice views from the second-floor weight room, but it made for bad news last July when it was discovered that borer worms had chewed away most of the pilings under the building.

The center closed for $2.5 million worth of repairs, the second shutdown in six years. The reopening was scheduled for this month. But last week, Parks Commissioner Henry J. Stern said the center would not fully reopen until August because an additional $1.5 million would be spent to replace up to 300 pilings with steel supports encased in concrete. The supports are 10 times cheaper than all new wooden pilings and don't appeal to borer worms. The center will reopen in phases starting in May.

New York Times- 2/18/01

You'd never catch a bivalve misbehaving like that!

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FOUNDED JAN. 1949

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

MARCH 10--- MICKEY MAXWELL COHEN , NOTED MARINE EDUCATOR AND LECTURER WILL SPEAK TO US ON "MINERAL TREASURES FROM THE SEA". Seawater is a virtual treasure trove of mineral resources. Dissolved silicon, manganese, sulfur, bromine and a host of other chemical substances have been utilized by molluscs and other marine organisms since the dawn of life, but only in modern times have humans discovered some of the techniques of extracting mineral wealth from the oceans.

Join Mickey Cohen when he returns to the New York Shell Club for another of his fascinating slide-illustrated lectures and discusses among other things: the incredible wealth lying on the sea floor in the form of manganese nodules; the technique of creating magnesium ingots from sea salt; and the World War I attempts by the Germans to extract gold from seawater.

APRIL 14---- ANNUAL NEW YORK SHELL CLUB AUCTION AND SOCIAL. DETAILED INFORMATION IS INCLUDED IN THIS MAILING.

EXOSKELETONS IN THE FAMILY CLOSET III

How lightly we say "Great minds run in similar circles" (or words to that effect), but now there comes to light a pairing that seems to offer credence to the concept.

Readers who remember "Exoskeletons in the Family Closet, I & II," which appeared here in issues #347 and 356, know those essays as attempts, lightened with whimsy, to provide the taxonomically challenged with guidance by example. Imagine the amazement in these offices at the recent discovery of a body of professional work, almost a century old, that applies not only the same principles, but even a similar mind-set !

The author of the species whose naming proved to be a precursor, though almost unknown to the wider malacological community, was a Dr. Hackney Lackluster. At the time when he applied his imaginative principles to his work he held the W. Jennings Ergot Chair of innovative Molluscan Taxonomy at the Waving Grain Institute of Creative Sciences, located in Rhinestone Shoals, Kansas.

The prolific Dr. L. seems to have labored under the impression that publication of his discoveries in the sporadic papers of the Institute, "Malacologorrhea," conferred immortality on his work. However, the International Commision for Zoological Nomenclature was never convinced of the profundity of the journal, so his pioneering concept was revolutionary only in the sense that it circled the drain. Its line of descent led from somewhat hard to figure out to very hard to find. Following is a selection from his attempts at contributions to the art/science of descriptive nomenclature:

GENUS & NEW SPECIES & SUBSPECIES	NEW FAMILY	NEW SUBFAMILY
Iodina tincta hirtus	Sterilidae	
Trivia inflata	Pomposidae	
Pollia flindersi	Untidae	Chiminae
Luria felina	Herekidae	
Arene taurus mexicanus	Mexicocidae	
Amusium manhattensis	Funcidae	
Aspella melancholica	Adversidae	
Textilia corderoi	Informalidae	Cottinae
Drupa depressa	Morbididae	
Sinum contractum	Formlalidae	
Polystira plastica	Utilidae	
Recluzia poormani pauper	Povidae	
Stellaria distans	Infinidae	
Architectonica inepta	Rickidae	Ignominae
Vasum amphora oldi	Antiquidae	
Lambis agilis	Friskidae	
Tibia fragile	Disabilidae	
Hermes swifti	Celeridae	
Singula caracteristica extrema	Eccentricidae	
Williamia tellea archeri	Anxiidae	Tyrinae
Atlanta burnupi	Damnyankidae	Villainae
Cyclina histrionica	Periodicidae	

GENUS & NEW SPECIES & SUBSPECIES	NEW FAMILY	NEW SUBFAMILY
Stromboli volcano belcheri	Calamidae	
Inuda barbara runsorana	Depravidae	
Tiara tryoni prematura	Impetuosidae	
Nesta deserti	Maturidae	

DISTURBING CONSIDERATIONS

From Shell Notes #17, October 1955.

We all remember Dr. Clench's vow to give the name Puperita pupa dupa to the first valid subspecies of this little Neritina. But he is soberly told by the Congress of the International Commission on Zoology to " avoid.....(the) bizarre, comic or otherwise objectionable" in formulating new names. Too bad, it could have been fun. Better euphonious names like Badiofaux or Strongylocentratus. The Congress also preferred that if you gotta, use the Roman name of a city or geographical unit, not the modern; thus avoid names like viennnensis or bordeausiacus , find out what the mighty Caesar said. (And yet he probably never (heard of Nove Eborica -- lil ol New York to you). Like many others we feel a name is a name is a name is a name and the less obstacles put in its way the better. Morris K. Jacobson

The present editor is in full agreement. For proof, see "Exoskeletons in the Family Closet I, II and/or III.

EXCERPTS FROM "THE HUMAN ANIMAL" BY WESTON LA BARRE

From Shell Notes #12, Feb. 1955.

The speed of simple nervous coordination has improved throughout evolutionary time. For example , mollusk mentality within a comfortable protective shell is impossibly slow by human standards. A nerve impulse in a fresh-water mollusk travels only 5/16 to 8/16 of an inch a second, that is, barely 94--150 feet an hour. Even in slugs, which have given their very name to slowness, a nerve impulse travels around 19 inches a second, or a little over a mile an hour, and in frogs the rate is a respectable 70 or 80 feet a second. In human beings the speed of nervous impulses is 400 feet a second and therefore, in purely functional terms, a human nerve is 10,000 times as good as a mollusk's. While mollusks evidently do not need much speed in order to survive, the general survival value of nervous functioning is surely indicated in the great and continuing improvements made on it in evolutionary times.

Thus much for Mr. La Barre. Then our member Jim Poling continues thus philosophically: "All I can say is , lucky mollusks. Speed, as an essential tool for survival, doesn't seem to have made our lot any happier. I wonder what the speed-ratio of nervous breakdown is between man and mollusk?"

ON THE TENDENCY OF MALACOLOGISTS TO UNCONSCIONABLY INCREASE THE GENERIC NAMES IN THE SCIENCES

From Shell Notes #27, Dec. 1956.

In recent numbers of this periodical, as well as in many others far better qualified to speak on the matter, there has been much dissatisfaction expressed with the tendency of so many professional malacologists to increase unconscionably the generic names of science. Frequent reference in this connection has been made among others to a recent work on the Cypraeas of the world. However, it many not be entirely without interest to note that this tendency to view this matter with alarm has honorable historical roots in the dim beginnings of conchology. For on page 129 of
John Warren's book, "The Conchologist" (Boston 1834), we find the following statement: "Lamarck has done much for Conchology; but I consider he has increased , unnecessarily, the genera of Linnaeus."Which goes to show that every point of view can be extended to the ridiculous.

Morris K. Jacobson

HOW MANY SPECIES OF MOLLUSKS ARE THERE?

From Shell Notes #26, Oct. 1956.

In the Revista del la Sociedad Molacologica (Vol. 6, p.102) we find a summary of the number of mollusks, living and fossil, that had been made by the Schilders. We extract some interesting items: in 1767 Linne named 841 species, in 1822 Lamarck knew 3,590. Pactel in 1890 has 44,060 names, Hesse in 1929 104,000. More recently Wenz, using some mathematical formulae, estimated there must be all told about 128,000 species. And Schilder using these same formulae estimates that there are described and undescribed no less than 250,000 recent and 1,900,000 fossil species, or more than 2,000,000 all told. And further using Wenz's percentages and a chronology set up by Barrell, the writer in Revista assumes that from the Algonquin geologic era to the present there must have been about 5,000,000 species.

Stay tuned--- by the next issue we hope to have an update on the latest best guesstimates to see if the species explosion continues or abates.

(Ed. Note) No follow-up has been found, but all indications are that expansion of the species list is far from abating, even to this day -----and even when counting only the convincing addition.

(FROM SHELL NOTES # 4, MARCH 1951)

A SHELL COLLECTOR'S FANTASY

When my time comes to travel on
To mystic worlds afar,
Then give to me my Angel Wings,
And pointed, large Sea Star,

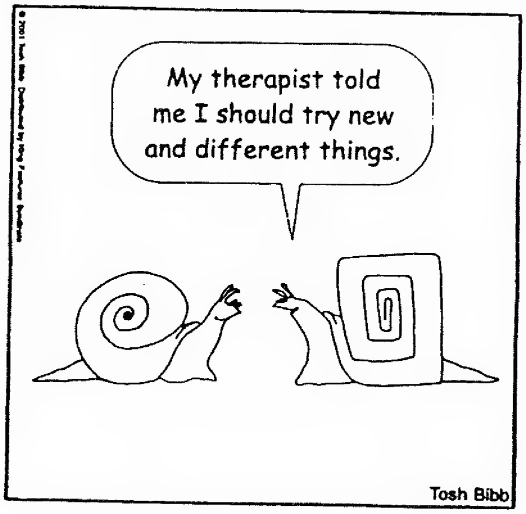
My Harp shell would like to take
Some cheerful tunes to strum,
Perhaps to while away the time
When to the gates I come.

If I've done well and rate a Crown,
Choose one for me that's white and brown.
In case I'm going where it's hot,
A large fan shell would help a lot!

The Sand Dollars I'll leave behind
And Money Cowries too.
For all such things there'll be no need
When earthly ways are through.

The Heart Shells are for sentiment
To think of all the friends
Whose pleasant company I have
Until this shell dream ends.

The New Breed


My therapist told me I should try new and different things.
Tosh Bibb

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COMING EVENTS

JUNE 9 - **CLUB PRESIDENT CARL EHRLICH WILL SPEAK TO US ABOUT HIS RECENT DIVING EXPEDITION TO THE PHILIPPINES. IT WILL INCLUDE A SLIDE PRESENTATION AND A DISPLAY OF SHELLS HE GATHERED THERE.**

SEPTEMBER 8 - MEL SPRINGER COLLECTOR EXTRAORDINAIRE WILL PRESENT SLIDES AND DISPLAY SHELLS FROM HIS RECENT TRIP TO THE NORTHEAST COAST OF BRAZIL.

OCTOBER 8- FIELD TRIP TO LONG ISLAND BEACHES AND BAYS. MEMBERS WILL CARPOOL TO THE SITE. CALL CARL EHRLICH (212-675-7601) OR CHARLES WHITMAN (212-861-8211) FOR DETAILS.

NOVEMBER 2- THE PHILADELPHIA SHELL SHOW. THE CLUB ORGANIZES A CARPOOL TO TAKE INTERESTED MEMBERS. PLEASE CALL CARL EHRLICH OR CHARLES WHITMAN FOR DETAILS.

SNIPPETS FROM SHELL NOTES PAST

January 1955--- NO. 11 ---- MOLLUSKS in the news.

We are indebted for the following interesting items to several of our more eagle-eyed members.

ITEM. Herald Tribune, Nov. 9 1954-----An ad from the Orlando (Fla.) Sentinel Star:"Snails in trees? Orange trees that is . We use them in Central Florida to keep insects out." (Ever see a Liguus in hot pursuit of say a dragon fly or mosquito? Ed. query)

ITEM same paper. Dec. 28, 1954------From Grafton, West Virginia. "Residents....wondered today how an octopus three feet in diameter got into a small stream on the outskirts of town."(And more on this. The fresh water octopus is as indestructable as the better known sea serpent. It was the subject of some hot words among conchologists some decades back. We know how the octopus could have gotten there, but it says right here that the four boys killed it and took it to the dog catcher---- where else??)

March 1955---- No. 13--- From Henry D. Thoreau's Journal

"The stinkpot shell, covered with mud and fine green weeds, gives him exactly the appearance of a stone on the bottom."Editor's guess: Vivipara contectoides which answers the description when even a little bit dead.

December 1954---No. 10--- Notes on New York City Malacology

Did you know that at least three species have areas within the city??? These are: Gemma manhattensis Prime -- t.l. "in the East River at Hell Gate between Mill Rock and the mouth of the Harlem River";Cingula modesta H. C. Lea (now Assiminea m.) t.l. "Brooklyn, N.Y." and Vallonia excentrica Sterki, t.l. "Staten Island, N.Y."

HIGHLIGHTS OF THE FEBRUARY MEETING

The speaker for the day was Don Riepe, director of the Northeast Chapter of the Amercian Littoral Society and manager of New York City's Jamaica Bay Wildlife Refuge. His subject was the fauna of the city, with major emphasis on the Refuge.

The bay and its marshy islands have attracted 330 recorded species of birds over the years. At present, 25 to 30 species of waterfowl overwinter there, now in declining numbers. Snow geese, however, are on the increase, to about 1,000 a season. Another thriving species is the laughing gull, which has gone from one pair a few years ago to about 7,000 now.

Gulls are far from a laughing matter at nearby Kennedy Airport. When they suddenly appear ahead of a jet only luck can keep one or more from being sucked into an engine. The result is damage to or destruction of a million-dollar engine. For a departing flight it means immediate emergency return. Bird strikes have resulted in disaster, and JFK takes strong measures to prevent contact, aided by milder methods devised by the refuge. It has planted grass that grows higher than 7 inches, which discourages nesting. It also sends rangers out to oil the gull eggs, which leaves the parents merely puzzled but the embryo smothered. JFK, on the other hand, sends out crews of runway monitors who are armed. Gulls, parents or not, found on the runways are shot. The airport does try to minimize this necessity by hiring falconers who turn their birds loose when they'll throw a scare into the invaders by possibly zapping one.

Jack rabbits have proliferated in recent years, probably having started with escapees from a shipping crate at JFK. They keep the snowy owl population well fed. Barn owls are welcome, too. For them, the Refuge has built and set out over 20 nesting boxes on poles. Racoons and varieties of snakes and turtles are also residents, along with 70 species of butterflies. About 100 species of fish live in the bay, and it and other city waterways are visited by gray and harbor seals and porpoises. The eggs of a large population of horseshoe crabs provide food for the birds, so the crabs are protected from the fishermen, who like to cut them up for bait. For the general welfare of aquatic species, jet boats are restricted to certain areas of the bay.

Don's talk was illustrated with excellent aerial, scenic, and close-up slides. He closed by saying that tours of the Refuge can be arranged, and it was agreed that this should be a Club field trip in the near future. A long and lively Q&A session followed the presentation. Romuald Czepulkowski brought mollusks into the proceedings with the mention of some of the species of the area.

The door prizes were books: "Shells of the World," LaRousse, won by Al Scarpetti; "Guide to Shells," Simon & Schuster, won by Sandy Kay, and "Sea Shells of North America," won by Howard Israel.

SOME OLIVA SPECIES OF THE MID-PLEISTOCENE OF SOUTHERN FLORIDA

BY ALLEN AIGEN

INTRODUCTION: It can be very difficult to distinguish modern closely related **OLIVA** species, as they differ subtly between species and can vary widely in some characteristics within a species, especially between populations. Fossil olives, which lack original color and pattern, usually even with UV light, can cause no end of uncertainty, and require detailed descriptions or statistical analyses to identify accurately. This article deals with 6 common to rare named **OLIVA** species from one locality in southeastern Florida. Popularly known as South Bay, this location (the North New River Canal levee about 1-2 miles, or 1.5-3 km, south of South Bay, Palm Beach County) primarily contains the middle Pleistocene Bermont Fauna of the Okeechobee Formation of Scott (1993) and Petuch (1994). This is better known as the Bermont Formation of Dubar, 1974. I have a large collection of olives from this location, but not all the named Bermont forms are found here. For a summary of the locality, and the stratigraphy, see Aigen, 2000.

This article does not name new species, and only suggests synonomies. I use the species names as described, and try to further compare and clarify the populations. The chart that follows will help you to compare the six species referred to this location. However, I believe that careful statistical work will show that there are actually only two very variable species there, both of them within the variations of modern Florida species. Three other Bermont species will await a further study. A dichotomous key is also provided but is useful only when the protoconch is well preserved.

There are basically two current models used in the description of molluscan species based on shell characteristics (morphospecies). The first model describes as a distinct species any population that includes members with a "distinct form," where the population can be shown to be significantly different from its neighbors. There may be minor overlap of individuals that cannot be separated from other species on the basis of shell alone, but the populations as a whole are distinct and separable, and thus considered to constitute objective species that deserve names. This has been the dominant model until fairly recently, and is still used by many malacologists (who are now, however, generally referred to as "splitters"). The naming of species based on only a few specimens rather than large populations and comparing these few specimens to only a few type specimens of other species, uses this "distinct forms" model.

However, with the advent of personal number-crunching computers over the last twenty or so years a new model has become the standard (actually it has been essentially, but less rigorously, in use for hundreds of years). Populations that cannot be completely statistically separated are considered to be the same species. Even though the populations as whole easily can be distinguished, they are

considered to be variant populations of the same species, due to the presence of overlapping, indistinguishable forms in each population (or in intermediate populations). This "overlapping forms" model was used by Tursch et al (1998) to synonymize 41 previously valid species names with **O. FULGURATOR** (Roding, 1798), four valid names of **O. SCRIPTA** Lamarck, 1811, thereby reducing the Western Atlantic to only three objective species. Of course people who follow the "distinct forms" model say this leads to "lumping" of species that can, and should, be separated, and that the information lost by the said lumping is important. This study examines the use of both models, and suggests synonomies. I did not, however, do the very detailed measurements (about 30 per shell) and statistical analyses necessary to rigorously prove my hypothesis using the "overlapping forms" model, as I lack the necessary time, tools and expertise.

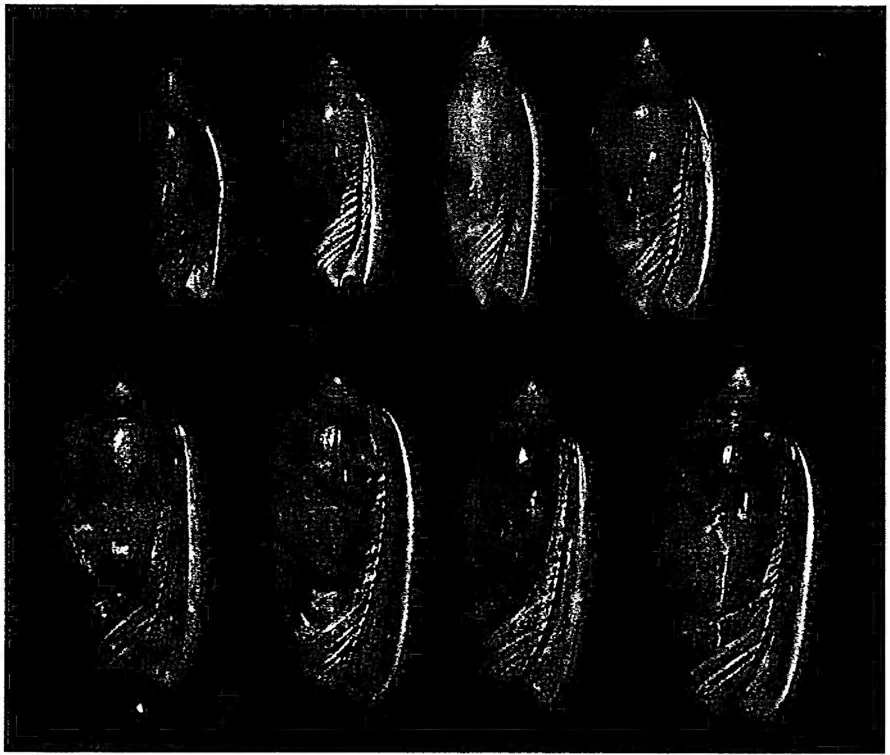
When possible, I try to collect at least 100 olives at a site where they are common, because I cannot be sure of the species until I can clean them and lay them side by side in size order. I take any well-preserved specimen and try to get many of the small ones (whether immature specimens or small species) as well as the largest, and anything odd-looking. As the area in question was well picked over before I got there (collecting over a few years), my sample is probably skewed toward the smaller and more common forms. But since olives were abundant, I assume I collected a fair representation.

Although there is no agreement as to what should constitute a subgenus in **OLIVA,** the subgenus **STREPHONA** Morch, 1852, is commonly used to include the Western Atlantic olives, and all of the species dealt with here. They are generally 25 mm to 100 mm long at maturity (at least 5 post-protoconch whorls), elongate to rounded-barrel shaped. A combination of overall shape and size, shape of the apex and of the protoconch, details of the subcultural channel, associated callus, and columellar teeth have been used to distinguish species. Collectors of recent olives also rely heavily on color patterns. These have proven to be more useful than overall shape for the common Western Atlantic species **O. FULGURATOR** (Roding, 1798) (= **O. RETICULARIS** Lamarck, 1811). This species has been shown to consist of numerous distinct colonies (many of which have been named) that overlap in all measured characteristics (morphometrics) when enough specimens have been considered. Overall shape varies from short and rounded to narrow and elongate, with high to low spires, but all the forms effectively overlap and form one objective species (Tursch et al, 1998).

There are objections to using morphometrics exclusively. Although this tool has been shown effectively to separate Olive species, independently of analytical studies (personal communication, Yuri Cantor 2001), the more tools that are used to describe and understand the populations, the more certainty there will be that we have accurately assigned names. Anatomical and biochemical studies of the Western Atlantic species have not been done, and may contradict the morphometric results. Of course fossils have only morphometrics available, but if morphometrics were proved to be inadequate to separate the recent species there would be less reason to assume that the fossils should be considered populations of recent forms.

Fossil **OLIVA** species cannot generally use the clues of color patterns which have been proved useful in the recent Western Atlantic forms. Unfortunately, most of the preserved details are fairly variable within a species, and vary subtly between species. Because some species vary widely in shape (especially spire and height) details of the protoconch, callus, channel and teeth (in that order) should take priority in determination. Note that the teeth on and near the suprafasciolar band are generally distinctive within a fairly narrow range of shapes and numbers, at least within a local population. The teeth at the posterior end are usually narrow and not distinctive. Teeth on gerontic specimens in this group have been relatively sharp and narrow , barely showing adult characteristics. They also have relatively thin shells, and may vary slightly in shape from the adult form. A mature shell has at least 5 post-protoconch whorls. In maturity, the height of the lip generally elongates. The extreme is seen in specimens where the lip practically covers the preceding whorl. I count maturity as starting with the change in slope of the subsutural edge of the body whorl from down toward the aperture to up toward the apex. This is not, however, seen consistently on all species.

SPECIES DESCRIPTIONS



(Top, left to right) *O. lindae*, 31mm; *O. cokyae*, 31mm; *O.lindae*, 37mm; *O. cokyae*, 38mm (Bottom, left to right) *O. edwardsae*, 42mm; *O. sayana*, 45mm, *O. sayana*, 45mm; *O. edwardsae*, 48mm.

0. EDWARDSAE OLSSON, 1967, is one of the two abundant species at the site. This species was described from the Belle Glade pit, about 4 miles (6.4 km) east of the South Bay site. Hoerle (1970) documented the Bell Glade pit, which is comparable in fauna to South Bay in a molluscan faunal list. She reported only two **OLIVA** species: **0. EDWARDSI** Olsson, 1967, and **0.SAYANA** Ravanel, 1834, from the Recent faunas.

Petuch(1991) amended the gender from **EDWARDSI** to **EDWARDSAE** to correspond to the sex of the collector, Corinne Edwards. He pictured one specimen (1991, 1992 and 1994) that he referred to as **0. EDWARDSAE,** probably correctly. (The teeth are not visible and details of the spire are vague. However the stepped pattern of the spire and the even stoutness of the body whorl do indicate **0. EDWARDSAE.**)

The 108 nature **0. EDWARDSAE** in my collection from South Bay vary from 27.5 mm. long and 12.4 mm wide, to 48 mm long and 21 mm wide with at least 5 post-protoconch whorls, and at least the begining of a widening lip. The apex varies from 12% of the height to 24%. The holotype is 44 mm long , and 19.4 mm wide, with an apex of about 21% of the height. (I also have 66 immature to submature specimens down to 9mm long.) Not all mature specimens will show a widening lip. A 36 mm long specimen of 5 1/2 whorls does not.

This form has a relatively large, flat, approximately 2 1/2 whorl protoconch. It also has a sligtly convex callus that goes smoothly down into the channel, so that looking closely at the apex, with the shell held vertically, there is no vertical notch or indentation in the profile. (Best seen opposite the aperture- See Fig.1). There generally will be a stepped apex, however, as there is a lateral gap formed by the canal at the suture. (Note, however, that the very low spired forms have the edge of the callus more visible although not obvious, and a smoother apex than higher spired forms.) The teeth are generally wide, blunt and flat often doubled. The apex is convex-conical to very low. Although Olsson (1967) noted the black color of specimens from the Belle Glade pit, that is a secondary characteristic, rarely found at South Bay or other localities. The strong luster, which he also notes, is typical of most olives, but the presevation at South Bays is not always as good as it was at the Belle Glade pit. Olsson also noted that the species is remarkably constant in its shape. Either there is much more variability at South Bay than at Belle Glade, or more likely mostly large, “typical” specimens were collected to represent the types that Olsson examined and based his description on. This species is also common in many other Bermont localities, and apparently has a wider range of forms than exhibited at South Bay.

0. EDWARDSAE is apparently a local, time-restricted variety of **0. FULGURATOR** (as redefined by Tursch et al, 1998). In overall shape, the low spired form is very similar to such forms of **0. FULGURATOR** as **0.CONTOYENSIS** Petuch, 1988. The high spired forms are most similar to **0. RETICULARIS BOLLINGI** Clench, 1934,

which was slso synonomized with O. **FULGURATOR** by Tursch et al, 1998. Whether it can actually be distinguished as a separate species or subspecies, or is another synononym because it includes forms that overlap in all measurable aspects of the morphology of at least one of the forms of the modern species, needs to be determined rigorously with detailed series of measurements and statistical analyses. The few specimens that I have with preserved color patterns are consistent with those of the modern O. **FULGURATOR**.

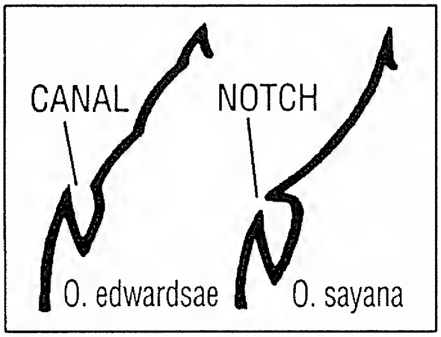


Figure 1. Diagrammatic cross-section of *O. edwardsae* (left) and *O. sayana* (right) at posterior canal of body whorl, 1/2 whorl from aperture.

O.**SAYANA** Ravanel, 1834 is also an abundant South Bay species. It has about 3 1/2 whorls. The apical callus is generally flared outward and ends just above the level of the edge of the next whorl, so that a slight gap is visible from the side, a very slight notch in the profile of the apex. Note that in O. **EDWARDSAE** the profile is more stepped than notched, as the callus does not overhang the next whorl, but goes down smoothly into the channel. O.**SAYANA** has wide, generally sharp teeth, and a generally narrower shape than O. **EDWARDSAE**. The flare of the callus away from each apical whorl may give this species a stepped spire. But this is only superficially similar to the stepped spire of O. **EDWARDSAE.**

Mature specimens of this species can be distinguished from submature specimens by the posteriorly lengthened outer lip. An old specimen will show the lip to be so high that it practically covers the previous whorl. The siphonal notch does not change angle, but the angle of the whorl top changes from sloping toward the anterior to slopping toward the posterior.

The 54 mature specimens from South Bay in my collection vary from 31 mm to 45 mm. The respective widths are 13 mm and 19 mm. The spire height varies from 11% to 21% of the total length. The 34 immature specimens vary from 34 mm to 11 mm.

This population can be distinguished from most populations of its Recent descendent (as redesribed in Tursch et al, 1998) by its relatively stocky barrel shape, and by its great variability. The color pattern, where preserved, is consistent with the modern form. Although a small number of specimens appear to overlap in form with modern **0. SAYANA**, this population is distinct; but it makes little sense to name it at a species or subspecies level unless a careful morphometric study shows that it is a distinct species. Tursch et al, 1998, showed that all the modern subspecies of this species overlap, and are best referred to as local populations, or varieties. As a newly evolved species, **0. SAYANA** characteristically shows a wide variety of forms. Ultimately only a few of these forms stabilized as distinct populations or subspecies. Modern populations are generally less variable.

0. SAYANA, although as common as **0. EDWARDSAE** at South Bay, is not noted in Petuch's Atlas from the Bermont Fauna. Petuch restricts the name **0. SAYANA** sensu stricto to the late Pleistocene Fort Thompson-to-Recent faunas only. He apparently assumed it to be a new species or subspecies, one of many he never got around to naming.

0. SAYANA SARASOTAENSIS Petuch and Sargent, 1986, named from 15-meter deep water 15 km off Western Florida, was noted by Petuch (1994) from Loxahatchee Fauna (Upper Bermont Formation). This subspecies is not a good name for the South Bay form. The modern population has a relatively consistent, smaller, broader, higher-aspired form. Although a few specimens of the South Bay population fit this form, it does not characterize the population. Tursch et al (1998) reduced this name to a synonym, representing a local variety.

0. SAYANA generally lives in shallower water than **0. FULGURATOR** does. There is not sufficient stratigraphic control to say whether this pattern held true in the Bermont Fauna.

0. MURIELAE OLSSON, 1967, is a species named from one specimen from the Bermont Fauna at Indiantown, Florida. This is a good example of why species should be named from more than one specimen, as the holotype is apparently a freak. On the holotype the siphonal fasciole band is constricted distorting the base of the columella. This may have been caused by damage to the mantle early in growth. It also may be the reason why Hoerle did not report it from the Belle Glade pit. Without that distortion it may have been considered to be just a very low spired **0. SAYANA**. (There appears to be a complete gradient between high and low spired **0.SAYANA**, although the low spired forms are relatively uncommon. Comparably low spired specimens of **0. EDWARDSAE** in my collection are similarly uncommon.)

Petuch (1994) tried to illustrate **0. MURIELAE** with one photo of an unconstricted specimen, possibly an uncharacteristically inflated specimen of

0. SAYANA. (As it comes from a different locality, Dade County, with distinctly different faunal elements, it may represent an ecophenotype, a geographic variant, or a different species.) Petuch (1998) also labeled a typically shaped but very low spired **0. SAYANA** specimen as **0. MURIELAE.** To further complicate the species, Petuch (1992) also illustrated an apparent low spired **0. EDWARDSAE** as **0. MURIELAE.**

I have not seen evidence of a contricted base in any specimen referable to **0. MURIELAE** other than the holotype, and I believe that the name should be restricted to that holotype. Perhaps futher collecting will show a population of distorted specimens that do not blend into another species. As the holotype lacks a protoconch, it may not ultimately be assignable to any other species with certainty. The chart below will add details to compare these species.

0. LINDAE PETUCH, 1991, was named from a submature specimen of 29 mm, collected 22 km south of South Bay, also from the North New River Canal. I have 11 specimens from South Bay ranging in length from 11 to 37 mm. Of the 2 mature specimens (36.6 and 37 mm long, 16 and 15.4 mm wide respectively, both with an apex of 8.3 mm high-about 22.5% of the total length), neither have an expanded lip, although both have 5 protoconch whorls. It is a distinctively tapered species with a wide, 2 1/2 whorled protoconch, a high conical spire, barely visible notches and almost no stepping in the spire profile. The columella is distinctly straight. (The columella of the other species bulges into the aperture of the shell at about the level of the suprafasciolar band.) The posterior teeth are often weak to obselete in maturity, the remaining teeth are thin to wide, but subdued, nearly flush with the columella. Some of the characteristics in the original species description are typical of most immature specimens of all the species, like narrow teeth and thin shell. This is a problem with **0. COKYAE** also.

0. SMITHORUM Petuch , 1994, from the overlying Loxahatchee Fauna (or Upper Bermont Formation), is essentially identical to its probable antecedent **0. LINDAE**, except that it is larger, at 47 mm. Because Petuch based his understanding of **0. LINDAE** on a submature specimen, he saw more differences in shape, differences that are really minor. I consider this to be most likely a synonym of **0. LINDAE.**

0. LINDAE may also be a synonym of **0. FULGURATOR.** This form is distinguishable enough from **0. EDWARDSAE** to be consistently separable, with no apparent overlap (although my sample is very small). However, this form may not be distinct enough to have separated from the many forms of the modern Western Atlantic species. **0. ANTILLENSIS** Petuch and Sargent, 1986, has a shape not unlike **0. LINDAE.** The details are not important as I am not trying to say that these two forms represent the same narrowly defined species, just that with the very wide range of shapes that have been shown by Tursch et al (1989) to constitute the full range of

O. FULGURATOR, it is likely that this early form fits within that range. Thus, if a full statistical analysis of this form cannot support separation, **O. LINDAE** may be considered an incipient species, one that did not succeed in becoming distinctive enough to be considered to be an objective species in its own right., and thus a local variant of **O. FULGURATOR**.

O. COKYAE PETUCH 1991, was also named from a submature (26 mm long) specimen, with the holotype from the Capeletti Brothers pit in Dade County. Petuch (1994) shows another, similar specimen from South Bay. It is variable, but basically barrel shaped, with a rounded to strong shoulder, and usually tapering toward the anterior. It has a wide, approximately 2 1/2 whorl protoconch, but a notched apex, with little or no stepping. The apex is generally flat-sided, slightly convex conical to high conical, with a callus that is nearly flat, rarely slightly flared like **O. SAYANA**. The central teeth often have flat, blunted ends, approaching the least flattened **O. EDWARDSAE.**

I have 13 specimens from South Bay, included two mature specimens of 5 post-protoconch whorls: 37 mm long by 17 mm wide with an apex of 21.6% of the length, and 35 mm long by 15.5 mm wide with an apex of 22.8%. More "typical" specimens of about 4 1/2 whorls, are 32 mm long, 14.5 mm wide, with an apex of 20.3% and 30 mm long, 13.5 mm wide and with an apex 22.3% of the length.

Similar to the other forms with 2 1/2 whorl protoconchs, this form apparently fits very well within the limits of **O. FULGURATOR**. It looks quite like **O. RETICULARIS** Lamarck, 1811, as was noted by Petuch in his description. **O. RECLUSA** Marrat has a very similar apex, also with a notch in the profile of the apex. Again, although this form is distinct enough from **O. EDWARDSAE** to be named, it apparently did not separate from the broad range of **O. FULGURATOR.** I expect a good statistical analysis will reduce **O. COKYAE** to a synonym.

O. SOUTHBAYENSIS PETUCH, 1994 is apparently a relatively rare form at South Bay. I have not found a specimen there that I can confidently assign to this species. The locality of the holotype in Petuch's Atlas doesn't specify the distance from the town of South Bay but I assmue it was close. The holotype is an apparently distinct species, medium sized with a rotund barrel-shaped body, a high, slightly convex apex starting with a wide 2 whorl protoconch, and 20-22 wide straight teeth. However, the only apparently important feature that clearly separates this species from my large **O. COKYAE** specimen is the larger number of teeth. **O. COKYAE** seems to be consistent at 14 to 18 teeth. Collectors from other locations, however, will likely close the gap between these forms.

Note that Tursch et al (1998) barely consider the teeth of the many species that they synonomized. Because the teeth are so variable, even within a fairly consistent local population, they were not considered to be worth measuring, or even counting. Therefore this form also apparently overlaps the limits of **O. FULGURATOR,** and is comparable to **O. OBLONGA** Marrat, 1867, among other named forms.

COMPARISONS OF SOUTH BAY *OLIVA* SPECIES						
	edwardsae	*sayana*	*muriele*	*lindae*	*cokyae*	*southbayensis*
Shape	Broad barrel	Broad to narrow barrel	Barrel with anterior contraction	Slender, weak shoulder	Stocky, angled shoulder	Rounded barrel
Mature size	28-48 mm	33-46 mm	47 mm	36-37 mm	30-32 mm	40 mm
Protoconch	Wide, 2 1/3 whorl	Conic, 3 whorl	? Missing from holotype	Wide, 2 whorl	Wide, 2 whorl	Wide, 2 whorl
Spire shape	High to low conical, straight to convex; Strongly to weakly stepped	Conical, straight to convex, rarely low, obtuse	Low, obtuse weakly stepped	High conical straight sided to weakly stepped	High to average conical, straight sided	High concave conical
Notched spire	No	Yes	Yes	Barely visibly yes	yes	?
Tooth shape (central columella)	Paired to flattened, blunt	Thin to wide, sharp	Thin, sharp	Thin to wide, obsolete posteriorly	Thin to wide, bent, often blunt	Wide, straight
Teeth (#)	15-20	15-21	17	10-18	14-18	20-22

GENERAL NOTES: The species that was probably parent to one or all of the South Bay species is common Caloosahatchee Fauna species **O. ROSEAE** Petuch, 1991. This, in turn, the probable descendant of the common Pliocene species **O. CAROLINENSIS** Conrad, 1863. **O. ROSEAE** (=**O. RETICULARIS SSP.** of Olsson and Harbison (1953), and **O. CAROLINENSIS** of Olsson (1967), is usually longer and narrower than either **O. EDWARDSAE** or **O. SAYANA.** It has wide, flat 2 whorled protoconch of **O. EDWARDSAE,** combined with the high, notched spire of **O. SAYANA.** I have forms very similar to this species from other Bermont localities, aparently from deeper water than the dominantly shallow water South Bay locality. Ultimately **O. FULGURATOR** may be extended back into the Pliocene, with a much wider range of overlapping forms than in the Recent. If so it may be prudent to save at least some of the fossil epithets as subspecies names.

There possibly was interbreeding between **O. SAYANA** and **O. EDWARDSAE,** because I have a few specimens which seem to be **O. SAYANA** but have the teeth of **O. EDWARDSAE.** There are also some **O. EDWARDSAE** with the teeth of **O. SAYANA.** It is possible, but not probable, that **O. SOUTHBAYENSIS** and **O. COKYAE** are also

interbreeds, rather than true species. **0. LINDAE**, with its distinct, straight columella and often obsolete teeth, appears to be less closely related. However, a careful morphometric analysis of enough of my specimens will probably show that all these forms include specimens which cannot be separated from specimens of **0. FULGURATOR**, and thus would be best treated as synonyms, possible subspecies.

CONCLUSION: The modern Caribbean fauna has only three **OLIVA** species occurring together: **0. FULGURATOR, 0. SAYANA** and **0. SCRIPTA.** The many named forms of these species occur in distinct colonies with litttle or no geographic overlap. Thus you cannot find as wide a range of forms in a modern Florida areas as you can at South Bay. This implies that there was at least the begining of rapid speciation during the middle Pleistocene Bermont that apparently did not survive into the late Pleistocene. The basal Pleistocene Caloosahatchee Fauna of the Okeechobee Formation largely died with the drop of sea level and water temperature caused by glaciation. The middle Pleistocene Bermont Fauna include new forms that evolved to take advantage of a new open environment following the return of the sea. Whether or not these forms separated completely into new species in the short time before their extinction is not proven, but quite possible. However we cannot check interbreeding in fossils directly, so we must compare morphologies of these and closely related morphospecies.

Considering fossil populations as equivalent to geographic populations, these distinct forms must also be compared to the very wide total morphologic range of the modern species. If some of the varieties within a fossil population cannot be morphologically separated from modern forms, the population should be considered to represent a time restricted variety or subspecies of the modern species.

Thus using the “distinctive forms” model, there are two common species (**0. SAYANA** and **0. EDWARDSAE**) two relatively uncommon (**0. COKYAE** and **0. LINDAE**) possibly one very rare species (**0. SOUTHBAYENSIS**) that one can expect to occur in the middle Pleistocene Bermont at South Bay and at many similar areas in Southen Florida. This does not include **0. MURIELAE**. despite Petuch’s efforts. However, use of the model of Tursch et al, (1998) probably leaves only two species, **0. SAYANA** and **0. FULGURATOR**. The named Bermont forms would be considered to represent incipient species, and only varieties (possibly subspecies) of the modern forms. However, until the rigorous analyses are made, and until anatomical and/or biochemical studies corroborate the morphometric results, it is best to use the valid names and indicate that they are questionably equal to **0. FULGURATOR.**

There are three other species named from the Bermont by Petuch (1994) which are described from a Dade County locality and may all represent deep water, coral reef or other environments ot found at South Bay. These, and other forms from other Bermont localities, must wait for further study.

I would be happy to lend my specimens to anyone who wishes to do a good statistical analysis of these specimens using the criteria of Tursch et al. 1998.

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KEY TO THE OLIVA SPECIES: SOUTH BAY BERMONT FAUNA

1. Protoconch of about 2 1/2 wide, flat whorls. Go to 2.
   Protoconch of three conical whorls. **O. SAYANA.**
2. Spire basically smooth sided except for narrow notches between whorls. Go to 3.
   Spire showing stepped whorls, no notches. **O. EDWARDSAE.**
3. Columella protrudent. Go to 4.
   Columella nearly straight, teeth weak, shell tapered. **O. LINDAE.**
4. 14 to 18 teeth, noticeable shoulder. **O. COKYAE.**
   20 to 22 teeth, rounded. **O. SOUTHBAYENSIS.**

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RUSSELL H. JENSEN

DECEMBER 29, 2001

Long-time members remember Russ from the years when he was an active member of the Club and a favorite program presenter. At the time, he owned and ran a florist business in New Jersey. He discovered shells in Bermuda during WW II while serving in the Navy, and he returned many times to continue collecting, observing and studying. One result is a display of Conus bermudensis that runs the gamut of its variations -an eye- and mind-opener wherever it appears. His methodical enthusiasm led to a second career serving on the staff of the Delaware Museum of Natural History. It also prepared him to become a popular shell-show judge and to create a book, “Marine Mollusks of Bermuda” soon to be published.

As a collector, Russ came prepared with exactly the right equipment. A skillful craftsman, he made specialized containers, sieves and other tools of the craze, including adjuncts to his diving gear. To clean out small shellss he neatly tinkered a nozzle that delivered a strong, fine jet. Photos of him and some of his creations in action can be seen in Tucker Abbot’s “Kingdom of the Seashell.” On page 119 he’s at the center of a group of three conferring snorkelers. On page 123 is his right leg, with diver’s knife. On page 125 he’s prone in a tide pool, wearing the rubber pate patch he made to keep the sun off his bald spot. On page 124, Tucker holds a Jensen specimen cannister with flotation buoys. Failing memory suggest that Russ may also be seen in other books or published material.

It seems safe to say that Russ’s many friends, like those in the New York Shell Club, will remember him most not so much in admiration for his accomplishments, but warmly, as a man of good sense, good nature and good humor.

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MEETING DATES 2002

OCTOBER 13---FIELD TRIP
SAT., NOVEMBER 2-- TRIP PHILADELPHIA SHELL SHOW
DECEMBER 8

WHERE WE MEET

Regular meetings are held on the second Sunday of the month at the American Museum of Natural History, Central Park West at 79th Street, New York City, starting at 2:00 P.M. We use room 319 on the third floor. There are three exceptions; the November trip to the Philadelphia Shell Show, the April Club Auction and Social, and the June meeting held on the third Sunday. Visitors are always welcome.

On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

OCTOBER 13 - OUR FIELD TRIP WILL BE A MORNING AND EARLY AFTERNOON OF SHELLING ON THE NORTH FORK BEACHES AND BAYS FOLLOWED BY AN AFTERNOON BEHIND THE SCENES VISIT TO THE RIVERHEAD RESEARCH FOUNDATION , A MARINE MAMMAL AND SEA TURTLE REHABILITATION CENTER IN RIVERHEAD, LONG ISLAND . A FOUNDATION BIOLOGIST WILL NARRATE A

TOUR OF THE THE HOSPITAL WHERE RECOVERING PORPOISES, WHALES, SEALS AND SEA TURTLES ARE BE TREATED. WE WILL DEPART AT 8:30 A.M., HAVE A PICNIC LUNCH OR EAT AT A LOCAL RESTAURANT, AND THEN RETURN TO NEW YORK, NO LATER THAN 7:30 P.M. CLUB MEMBERS WILL CARPOOL THOSE INTERESTED. PLEASE CALL OR E-MAIL CARL EHRLICH AT THE NUMBERS ON THE FRONT PAGE, OR CALL CHARLES WHITMAN AT 212-861-8211 (E-MAIL CHWHIT@NYC.RR.COM).

NOVEMBER 2- THE PHILADELPHIA SHELL SHOW. THE CLUB ORGANIZES A CARPOOL TO TAKE INTERESTED MEMBERS. WE LEAVE NEW YORK AROUND 8:30 A.M. AND RETURN BY 6:30 P.M. PLEASE CALL CARL EHRLICH OR CHARLES WHITMAN FOR DETAILS.

HIGHLIGHTS OF THE MARCH MEETING

The speaker was Mickey Cohen, making his fourth presentation to the Club. He is Manager of Bayswater State Park in Far Rockaway, Queens. His subject was the chemical elements found in seawater. He distributed lists showing the parts-per-million presence of 42 elements dissolved in the oceans, the 5 metals found in manganese nodules and the 8 elements that are concentrated in marine organisms. Seawater dissolves elements from the earth it comes in contact with, and some arrive in streams that feed the oceans, including salt from volcanos. So-called black smokers, erupting from deep-sea beds, add a number of them.

Mickey noted that all of our iodine, bromine and magnesium come from seawater, and that manganese nodules are being recovered. They are made up of 45% manganese, 14% iron, 1% nickel, .5% copper, and .5% cobalt. He says he gets emotional thinking about possible future use of silicon, as found in the glass spicules of sponges. He predicts that spicules will some day be used as bases for circuits in microchips. Further, he wonders if sponges can be genetically altered to produce spicules of optimum size and shape.

Sponges have an impact on conchology because they use the sulphur in seawater to produce sulfuric acid. When they grow on shells, especially the obliging dead ones, the acid dissolves the shell and returns calcium carbonate to the water, for use by future shell makers. Cobalt has its efect too, showing up as the blue in mussels, and bromine is found in muricids and is the blue Mercenaria.

The door prizes were Conus mustelinus, won by Al Scarpetti; Cypraea chinensis, won by Sandy Kay, and a terrestrial won by Howard Israel.

HIGHLIGTS OF THE APRIL MEETING

The 496th meeting of the New York Shell Club was the annual auction, held on April 14, 2002 at Dorothy Jensen's Broadway Dance Studio in Astoria, Quee, ns.

The doors opened at 11 a.m. and auctioneer Romuald Czepulkowski opened the bidding at 1 p.m. He was assisted by Carl Ehrlich. The auction list ran to 100 shells and related items, and 40 fossil specimens. The most notable offerings were:

Volutoconus bednalli, 128 mm-- $155

Cypraea langfordi, 52 mm -------$125

Conus pergrandis, 69 mm -------$100

Conus chiangi, 17 mm------------$65

Cypraea aurantium, 81 mm--------$58

Conus beddomi ---------------------$55

Lyropecten nodosus, 4 forms-----$47

Cypraea guttata, 55 mm---------- $46

Conus gloriamaris, 84 mm--------$36

Conus clerii -----------------------$30

Scaphella junonia, all 3 forms, 112-134 mm ----$ 28

Conus kinoshitai, 59 mm ---------$25

The sale table and bargain table were heavily patronized, and many books and pictures found new homes. For the famished there was wine, soda, punch, coffee, cake, and snacks. The break was a pizza fest.

The door prizes were a group of 12 shell drawings and photos, including some of live cowries; Veronica John's book, "She Sells Seashells," and Sergio Angeletti's book, "The Seas and Their Shells." The raffle prize was Conus clenchi, Martens 1943.

HIGHLIGHTS OF THE MAY MEETING

President Carl Ehrlich opened the meeting by noting that our treasury is strong, and suggested that some of this money be put to good use in a field trip or other activity. He reported that the April auction had netted more than $1500.

Romuald Czepulkowski suggested that members might invite the Club to their homes to see their collections. Charles Whitman said we should use the internet or website to create interest in the Club.

Al Scarpetti suggested workshops as programs, especially in winter months. He suggested October as a likely time for a field trip.

The program was a display of more than fifty lots of shells from Carl's collection, and his comments on them. Some lots demonstrated extremes of variability within species. Most were specimens he had collected, and all were noteworthy for beauty, size, rarity or locality. One was Lyria leonardi Emerson, 1985-- one of two specimens known.

The door prizes were Mitra ambigua, won by Irv Hoppenwasser; Bulla ampulla, won by Al Scarpetti; Junonia scaphella won by Sandy Kay; Lottia gigantea, won by Milton Werner, and Conus miles, won by Charlie Whitman.

HIGHLIGHTS OF THE JUNE MEETING

Program Director Al Scarpetti proposed arranging a tour of the Riverhead Foundation. It was agreed that he should get in touch with Chris Buchman for this purpose.

President Carl Ehrlich noted that the Long Island Shell Club has decided to reduce its schedule to quarterly meetings, and to not charge dues.

The speaker was Carl, who described a recent shelling trip to the Philippines. He and Denise flew by way of Vancouver and Hong Kong, and started collecting at Cebu and its satellite island, Mactan, later moving on to Bohol. For two weeks they dove every night, gathering an extensive array of fine specimens, many of them unusual. In a pair of Harpa amouretta the prominent color is red. A Conus and a muricid he believes to be unnamed. A Conus kinoshitai at 70 mm is 6 mm longer than the listed record size.

Shell dealers descend on tourists in droves, but Carl sought out acquaintances from previous visits, selecting from their offerings so as to fill out his collection here and there. Denise managed to get stung on one finger by a lion fish, but that was easily forgotten in a successful and enjoyable trip.

Carl had several dozen of his most notable finds on display, and illustrated his narrative with slide photos of scenery, shelling locales, shells both live and cleaned, the cleaning process and his dealer friends.

IMPERFECT PEARL? WHAT WOULD JACKIE SAY? A COUNTRY COUSIN TO A PRIZED GEM ELICITS A NEW "OH"

By Tracie Rohzn

Spotlighted on the second page of Tiffany's baby -blue catalogue--- in the past, a fantasy of quarter-million dollar diamond brooches and million-dollar emerald necklaces-- is a small and simple pearl bracelet with a silver clasp. The first thing to be noticed is the price: this Tiffany's bracelet is $250. The second thing is these pearls are oval, not round. Along with matching necklace nearby ($375), the bracelet is made of freshwater pearls.

Through a happy confluence of science and marketing, freshwater pearls-- poor relatives of the pearl family are making their presence felt in the fanciest of jewelry cases this fall.

Unlike saltwater cultured pearls, the perfectly white orbs that glowed on the necks of Grace Kelly and Jacqueline Onassis (and come one to an oyster). freshwater pearls in nature are usually found in small, weird, shockingly colored shapes that resemble Rice Crispies. And because they grow in a cluster in a single mussel, they are a lot cheaper than Japanese Akoyas, the classic white, round saltwater pearls. But in the last few years, scientists in China have found a way to make the pearls more like the saltwater variety---bigger, rounder and whiter. High-end retailers have responded by using white freshwater pearls in the same sedate styles as their salty cousins with the hope enticing a less affluent customer.

To the executive director of the Cultured Pearl Information Center, which represents both freshwater and saltwater pearl dealers, the barrage of freshwater pearls has more do with economics than style. 'They are dirt cheap," he said bluntly. "They 're cheaper than imitations."

At Tiffany's flagship store on Fifth Avenue, freshwater pearls are occupying prime--very prime-- real estate: the velvet -lined display cases on the main floor. Tiffany's is not the only luxury jeweler using the inexpensive pearls. Big time designers like Barry-Kiesselstein-Cord, Angela Cummings, and David Yurman are featuring them.

Freshwater pearls have had their fashion moments before. Lillian Russell ordered up her much-imitated dogtoothed chrysanthemum brooch in 1904. When Diamond Lil got her pin, natural freshwater pearls were dragged from the Mississippi mud by poor men and women hunting catfish. Today 99.9% of the world's freshwater cultured pearls come from China. The pearls are farmed in rivers, streams, and rice paddies. Last year 1500 tons of freshwater pearls were cultivated in China, compared with 60 tons of saltwater pearls worldwide.

In A. D. 800, the Chinese discovered how to stimulate the growth of pearls-- creating cultured, as opposed to natural pearls-- by placing tiny lead Buddhas in mussels and ending up with pearlized lucky statuettes. But the business of culturing pearls in the freshwater inlets of China did not come into its own until the 1960's and early 1970's. And then the pearls where of inferior quality; they looked like pearlized globs of varying wrinkly shapes.

But then came a virus that wiped out three-quarters of the Japanese Akoya harvests in the early 1990's-- a virus that is still killing off oysters. Spurred by the mysterious disease, China's scientist went to work and vastly improved the quality of their freshwater pearls-- mainly by changing the mussel species (from Cristaria plicata to Hyriopsis cumingii, the Chinese triangle mussel).They also changed the age at which the mantle tissue-- the pearl-making tissue secreted by the animal-- is injected into the mussel, to one year old from two to two and half years old. (Saltwater pearls begin with the insertion of a bead--simulating a piece of sand--but the freshwaters are cultured with a piece of mantel tissue taken from another mussel.)

As China's quantity and quality have improved, the freshwater pearls have also become cheaper - a double advantage for retailers.

Excerpted from the New York Times- 8/24/2002

AS THE RIVER COMES CALLING, A SCRAMBLE TO MEND THE WALL

By Jim O'Grady

A warning to young outfielders playing in the new Little League at Queensbridge Park: Don't chase a long fly ball that's zooming towards the East River. The venerable timber and stone seawall that borders the park's western edge is crumbling.

"You get some pretty good currents in the East River," said William Slezak, the chief of civil projects in the New York office of the Army Corps of Engineers. " I have no doubt that if the wall is in bad condition, it could go fairly quickly."

The seawall's troubles result partly from its age, partly from environmental changes. Marine borers--sea worms that eat submerged wood-- returned to the harbor in recent years as its waters have become, cleaner, and their presence has aggravated the problem.

Excerpted from the New York Times- 8/4/2002

Editors note--- We could give the Times a heads-up, but bivalves have been getting enough bad press for other misdemeanors. Worms are just worms-- let them take the heat.

U.S. STEPS IN TO SAVE RARE CAVE SNAIL IN MISSOURI
A BAROMETER OF WATER QUALITY

The government has placed a rare Missouri cave snail on the federal list of endangered species. Tumbling Creek Cave snails have died off in such great numbers that scientists are worried about the health of the cave stream and its water source, an aquifer that serves both animals and the surrounding community.

Snails are a barometer of water quality, said Tom Aley, a water scientist leading the effort to save the snail. " I think the snail is an indication of the health of the whole aquatic ecosystem we have in the cave," Aley said. " It's the place where we can see the results of ground water contamination more readily than we can with other species."

Aley and his wife, a biologist, own Tumbling Creek Cave and operate Ozarks Underground Laboratory in southwest Missouri, not far from the country music town of Branson. With its 110 different and diverse species , including endangered grey bats, the cave has been declared a national natural landmark by the U.S. Department of Interior.

The snail, Antrobia calveri, may be the cave's most unique animal, because it is the only species within its genus. The snail is white with a pale yellow shell that has two or three whorls. It looks similar to other snails, but its tiny size--about one tenth of an inch-- makes it nearly invisible to the untrained eye, says Paul McKenzie, and endangered species biologist for the Mid-West region of the U.S. Fish and Wildlife Service.

Researchers have not agreed on what has caused the snail's sharp decline over the past six years. Peggy Horner, endangered species coordinator for the Missouri Deparment of Conservation, said there are a number of possible culprits, particularly runoff and erosion that add silt to the cave stream gravel where the snails make their homes. Other possibilities include temperature changes, fluctuations in water flow, or a new predator or competitor. The federal "endangered" designation will help get federal funds to help the snail, and it puts together a team of government and university researchers and other experts to develop a plan for the animal's recovery.

Excerpted from an Associated Press release printed in the Reading, Pa. Eagle-8/30/02.

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NEW YORK SHELL CLUB NOTES NO. 364 SEPTEMBER 2002

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MEETING DATES 2002- 2003

DECEMBER 8- OUR 500TH MEETING
JANUARY 12

WHERE WE MEET

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

DECEMBER 8-- OUR 500TH MEETING ---CARL EHRLICH WILL ENTERTAIN US WITH A TALK ABOUT HIS LATEST SHELLING ADVENTURE TO PAPUA-NEW GUINEA. HE WILL BRING SOME OF THE FABULOUS SHELLS HE FOUND DURING DIVES THERE . WE WILL THEN ADJOURN TO HIS APARTMENT (314 W. 22ND ST. APT. 4) FOR OUR 500TH MEETING CELEBRATION. THERE WILL BE FOOD AND REFRESHMENTS. PLEASE JOIN US FOR THIS CLUB MILESTONE WHERE YOU WILL HAVE AN OPPORTUNITY TO VIEW SOME OF CARL'S EXTRAORDINARY COLLECTION AND MEET WITH FELLOW ENTHUSIASTS. FOR THOSE WHO CANNOT MAKE THE REGULAR MEETING BUT WOULD LIKE TO COME TO THE CELEBRATION, FESTIVITIES WILL START AT 5:00 P..M.

JANUARY 12----MEL SPRINGER, AVID SHELL COLLECTOR AND PRESIDENT OF THE LONG ISLAND SHELL CLUB WILL ENTERTAIN US WITH A TALK AND SLIDE SHOW ON HIS LATEST OUTING TO THE NORTHEAST COAST OF BRAZIL.

HIGHLIGHTS OF THE SEPTEMBER MEETING

Due to cancellation by the intended speaker resulting from extenuating circumstances, President Carl Ehrlich declared that the program section of the meeting would be an informal discussion of ways and means of enhancing programs and attracting new members.

Present were a representative cross section of members ranging from novices to experts. An animated discussion followed on the type of speakers we should schedule for our meetings. There was a consensus that we should focus more on topics involving shells and shelling. Interest was expressed for having an outing in lieu of a meeting. Reaction was also favorable for including a grunge session. As to programs, Carl suggested inquiring among other clubs for possible leads, to supplement our existing list. Sandra Kay offered to work with Carl and Al Scarpetti on future programs.

The need for a web site was discussed, and Charlie Whitman said he would prepare a proposal for the consideration of the Club officers. Sandy Kay noted that this would require a lot of time and regular monitoring.

Charlie Whitman said that the value of the archive of issues of Shell Notes will be enhanced in the future by the publication of an index complete to publication time. It will be compiled by Dr. Richard Robbins, who does this type of work professionally. He had volunteered to undertake the project.

Romuald Czepulkowski suggested running off copies of our constitution and by-laws, mentioning them in Shell Notes and offering copies on request. Agreement was expressed.

Concerning our present low stock of material for our annual fund raising auction, Carl said that he would donate about 50 good specimens from his collection to make sure we can offer an attractive list.

Carl announced that demands on his time have forced him to resign as President. Although he could not be officially replaced at the present meeting, he urged that we try for an agreement on an acting president. Since Vice-President Larry Potter has similar restraints on his time, Carl suggested that Charlie Whitman be considered. Upon Charlie's acceptance of the plan it was agreed that he will carry out the duty of the presidency until properly elected. Sandy cautioned that as a nonprofit organization we may be obligated to offer all members an opportunity to vote in order to make the succession official.

Prospective member Marilynn Lundy was welcomed.

OCTOBER FIELD TRIP

The October meeting was replaced by a trip to Orient Point and Greenport for shelling and to Riverhead for a visit to the Riverhead Foundation for Marine Reseach and Preservation which educates the public with its exhibit facility called Atlantis Marine World. Our arranged visit included a guided tour that took us behind the scenes to see the holding tanks and laboratories used in providing aid to injured and stranded sea mammals and reptiles. The following is an account of that outing.

In the early morning hours of October 13 a small group of dedicated shell enthusiasts gathered in New York . Two hours later they would converge at our first shell gathering location -- the beach next to the Orient Point-New London ferry terminal. There they would be joined by member Sandra Hunter who lives on the South Fork. Despite the distractions of the beautiful North Fork countryside which was at its harvest best, our group dedicated itself to the task at hand---- finding the bounty the sea had deposited on North Fork shores. Our often-nose-to the ground manner of searching for mollusks large and small presented an interesting contrast to the fisherman surf casting for stripers and blues who appeared bemused by our antics.

Led by Romuald Czepulkowski complete with GPS to log our location, and reference books to aid in identifying any unusual finds, the group set about finding as many species of North Fork mollusks as possible.

An early group had a chance to shell briefly at the sand beach at Orient Point State Park on the Long Island Sound side. From there all rendezvoused at the Orient Pointy ferry terminal and proceeded to roam the rocky beach on Gardiner's Bay west of the terminal. The group doubled back to the Dam Pond bridge on Gardiner's Bay where in the sandy nooks at the base of the rock sea wall and in an adjoining pond bordered by marsh vegetation, the search continued. The final shelling was on a small beach next to the Greenport Ferry terminal. The overall species count was 33. Walking and wading at the different locations yielded beach and fresh-dead specimens of mostly familiar shells, but most in quantities that allowed being choosy about sizes and variations. The complete list with locations of the finds appears at the end of the account.

After our morning of shelling we proceeded to our last stop for a behind-the-scenes tour at the Riverhead Foundation for Marine Research and Preservation. It is authorized by New York State to operate the New York State Stranding Program for the rescue, rehabilitation and release of marine mammals and sea turtles. It is a complete hospital with a series of rehabilitation tanks including the largest in the Mid-Atlantic region used for this purpose. Whenever an injured seal, dolphin, whale, or sea turtle is found in New York waters the Foundation is called in to handle the situation. Its goal is to restore the animal to the wild if possible, or if the recovered animal would not be able to survive in the wild, to arrange for its adoption. The Foundation provides a marine mammal 911 service--- it sends a medical team to the location to make a decision on how to handle each situation. If it is a stranded large whale, the rescue team has to handle everything in the wild. If it is

a small whale, dolphin, sea turtle or seal the team has the option of bringing it to their tank complex and hospital at Riverhead for rehabilitation. During the recovery period contact with humans is severely limited so that animals will not become comfortable around or dependent on humans. This improves their possibility of survival once re-introduced into the wild. Carl, the Dr. Doolittle of the Club, drew a tut-tut for trying to establish animal to human communications with a wide-eyed year-old harbor seal pup lounging in a recovery tank. Its release was imminent. Releases are publicized and can be witnessed by the public.

The largest mammal the Foundation had dealt with was a 28-foot sei whale that was stranded on Long Island's South Shore on September 12th of this year. Unfortunately it was so malnourished that it had to be euthanized. The smallest animal was a marine turtle not larger than a human hand that had been purchased by an individual in Chinatown for some culinary purpose. A conservation-oriented friend persuaded him to turn it over to the Foundation where it was reared and released. Four varieties of seals (harbor, harp, hooded, and gray) can be found in New York waters, as well as four species of sea turtles (Kemp's ridley, loggerhead, Atlantic green and leatherback). During the summer most rescues are seals (tangled in nets, illness), while in the fall sea turtle rescues are more numerous. Sea turtles are dependent on water temperature and sun to maintain adequate body heat, since they are cold-blooded. If they forget to migrate on time when the water temperature drops they can suffer hypothermia. Their internal systems slow down, and ultimately will shut down, if they are not found in time. The photographs of severely injured seals tangled in nets, and descriptions of how balloons ingested by certain species of sea turtles lead to their death (loggerheads mistake them for their food-- jellyfish) gave all of us an appreciation of how a proliferation of man-made waste products has a devastating effect on wildlife.

In the adjoining aquarium we were able to see tropical fish in several tanks. These were caught locally during the warmer months when they migrate north with the Gulf Stream which is not far offshore. During the fall tropical fish kills are reported in local waters. Small eddies become separated from the Gulfstream complete with their fish population. With the water temperature dropping they die.

Our visit completed, the group started its journey homeward. Tides and the weather had not cooperated but the outing was deemed a success.

Collecting locations in Eastern Suffolk County, Long Island

A. Orient Point County Park, Long Island Sound side
B. Orient Point County Park, Gardiner's Bay side
C. Dam Pond bridge, East Marion
D. Greenport ferry terminal

The list of collected species is as follows:

Bivalva

1. Geukensia demissa (Dillwyn, 1817) = locations B, C, D
2. Mytilus edulis (Linne, 1758)= locations A, B, C, D

Bivalva (continued)

3. Anadara transversa (Say, 1822)= locations B, C, D
4. Argopecten irradians (Lamarck, 1819)= locations A, B, C, D
5. Anomia simplex (D'Orbigny, 1842)= locations A, B, C, D
6. Crassostrea virginica (Gmelin, 1791)= locations C, D
7. Laevicardium mortoni (Conrad, 1830)= location D
8. Mulinia lateralis (Say, 1822)= location D
9. Spisula solidissima (Dillwyn, 1817)= locations A, B, C, D
10. Ensis directus (Conrad, 1843)= locations A, B, C, D
11. Mercenaria mercenaria (Linne, 1758)= locations A, B, C, D
12. Pitar morrhanus (Linsley, 1848)= location B
13. Petricola pholadiformis (Lamarck, 1818)= locations B, D
14. Mya arenaria (Linne, 1758)= location D

Gastropoda

15. Hydrobia totteni (Morrison, 1954)= location D
16. Littorina littorea (Linne, 1758)= locations C, D
17. Littorina obtusata (Linne, 1758)= location D
18. Littorina saxatilis (Olivi, 1792)= locations C, D
19. Crepidula convexa (Say, 1822)= locations B, C, D
20. Crepidula fornicata (Linne, 1758)= locations A, B, C, D
21. Crepidula plana (Say, 1822)= locations B, D
22. Euspira heros (Say, 1822)= locations B, D
23. Neverita duplicata (Say, 1822)= location B
24. Urosalpinx cinerea (Say, 1822), albino form= location B, D
25. Anachis avara (Say, 1822)= location A.
26. Anachis lafresnayi (P. Fisher and Bernardi, 1856)= location A
27. Busycon carica (Gmelin, 1791)= locations B, D
28. Busycon canaliculatus (Linne, 1758)= locations B, D
29. Ilyanassa obsoleta (Say, 1822)= locations C, D
30. Nassarius trivittatus (Say,1822)= locations A, B
31. Melampus bidentatus (Say, 1822)= locations C, D
32. Ovatella myosotis (Draparnaud, 1801)= location C
33. Eupleura caudata (Say, 1822)= location A

BOOK REVIEW:

Bahamian Seashells, A Thousand Species from Abaco, Bahamas. Colin Redfern, 2001, published by Bahamanianseashells.com, Inc. $114

Those of us who specialize in Caribbean mollusks are very aware how few comprehensive and well-illustrated books there are on the subject. We are still hoping that one day some hard-working and self-sacrificing malacologist will put together the Caribbean equivalent of Myra Keen's encyclopedic work on the tropical west American fauna.

But in the meantime, there is some good news for us -- the recent publication (2001) of an extraordinary book by Colin Redfern on the mollusks of Abaco Island in the Bahamas.

This large-format softbound book (81/2" by 11" and 280 pages) seems most appropriate for serious amateurs and professionals. The 124 plates of illustrations are some of the best I have seen anywhere. The cost of making the plates all in color would no doubt have made the book unaffordable, but the 18 color plates which are included are very beautiful, including many live animals that have not been seen in published photographs before. I think even the most hard-hearted shell fancier will be softened by the exquisite and beguiling beauty of the nudibranchs shown in Mr. Redfern's book. The book's106 black and white plates have crisp portraits of the shells of the great majority of shelled mollusks of the area, and although at first you may wish they were all full color, once your eye has adjusted to the monochrome these superb quality illustrations are extremely helpful in identifying almost any shell you might be likely to find. In its illustrations and descriptions of 1000 species this book covers not only the larger, more charismatic ones but also far more small and microscopic shells than in any other comparable book.

The detailed descriptions include notes about the occurrence of each species in Abaco, both live and in drift, and the bibligraphy is also very helpful to anyone who can get access to a good professional library such as the main library at the American Museum of Natural History.

One of the things that makes this book so remarkable is that every aspect of the book is the work of Colin Redfern himself, including all the photographs except for the scanning electron micrographs. And it is a work of extraordinary quality and comprehensiveness that seems fully professional in execution.

My only criticisms are few. The outer cover of the book is unfortunately rather flimsy, and thus shows wear and tear quite fast, and also tends to pull away from the heavy body of the book with use. In terms of the content of the book, a slight increase in the overall warmth of the writing style would have made the text more engaging to amateurs. And if the plate numbers had been more prominently displayed, for example on the edge of the page, it would have made moving from the text or the index to the correct plate a little easier.

To purchase this book it is necessary to order it either from the author's website at Bahamianseashells.com or by mail from Bahamianseashells.com, Inc.at 21218 St. Andrews Blvd. # 647, Boca Raton, Fl. 33433.

Susan Hewitt--- 10/26/02

For those of us who wish that the elusive pot of gold at the end of the rainbow can somehow be found while out in the field pursuing our shelling interests, the following story should give us all some measure of hope.

TEACHER-SALVOR FINDS GIANT EMERALD IN CONCH SHELL OFF KEYS WHERE SHIP WRECKED

A teacher who sometimes works as salvor found a 40.2-carat emerald inside a queen conch shell he took from the site of a wrecked Spanish treasure ship off the Florida Keys.

The elementary school teacher from north Florida examined the wreck site of the 17th century galleon Santa Margarita about 30 miles off Key West on Sept. 4, while working as a part-time salvage diver for Amelia Research and Recovery of Amelia Island.

While looking for treasure, he collected several shells for his students, and took the shells back to north Florida with him. As the teacher, who wasn't identified by the salvage company , was cleaning the shells out at his school, he said the raw emerald rolled out of the conch. " He called our onsite guy and said, 'I was cleaning this shell and this little rock fell out, but I didn't want to get carried away," Amelia President Doug Pope told the News-Press, of Fort Myers. "He wasn't sure what it was. He thought it might be a piece of a Heineken bottle. So he brought it over here, and we looked it over. I knew it was an emerald."

They have yet to put a dollar value on the emerald.

Excerpted from an Associated Press release of 9/11/02 supplied by the South Florida Sun-Sentinel.

HOPING URBANITES WILL VENTURE WHERE CRABS AND KILLIFISH THRIVE

Fiddler crabs skittered across the muddy riverbank as, a few feet away, killifish and silversides darted through shallow water. A cormorant skimmed the surface looking for a meal; across the river a lone egret sunbathed gracefully.

But the scene on the Bronx River last Tuesday was not quite pristine. Just upstream from the crabs, a grapple hoisted hulks of twisted metal onto a barge. A public housing project loomed behind fences. The banks were littered with bottles and other trash.

Despite the industrial and urban setting, however, marine life on the Bronx River estuary is thriving, according to a team of marine biologists from two Bronx schools -- Lehman College and SUNY Maritime College (State University of New York)-- who are studying it.

"Most people think that the Bronx River is a sterile river, and it's not," said Dr. Joseph Rachlin, a professeor and director of the Laboratory for Marine and Estuarine Research at Lehman. "It's a very diverse and abundant river."

In fact, more diverse and abundant than previously thought. Last month, the team found two species of small fish never before identified in the river: the naked goby and the seaboard goby. They are also trying to identify a third species that was recently found..

Their federally financed research, overseen by the National Oceanic and Atmospheric Administration, focused on the river's estuary, the two-mile stretch where salt water from the East River mixes with fresh water from inland and tides are in full effect. The team waded or used a 46-foot boat belonging to SUNY Maritime to gather samples of marine life and test the water for salt and sediment levels, among other things. "Looking for bodies?" has been a common query from neighborhood children.

The biologists also interviewed the surprisingly pervasive fishermen to find out what fish they catch, and what they do with them. Bluefish and striped bass were among their responses -- for eating. Crabbing is also common. The presence of sea anemones and oysters, both sensitive to polluted water, are a sign that the water is clean enough to support a diverse group of organisms, said Dr. Rachlin.

Excerpted from the New York Times----9/8/02

DONATIONS FOR THE APRIL 2003 AUCTION

The New York Shell Club is soliciting donations from members for its April 2003 auction. This is the Club's biggest source of revenue. It allows us to publish Notes and pay for speakers for our monthly meetings. Since donations from estates have fallen off in the last years, donations from dealers and club members will be particularly important to insure the success of the auction now and in future years. Romuald Czepulkowski will be cataloguing all donations for this year's auction and all donations should be sent to him at the following address:

84-36 85th Avenue #2
Woodhaven, NY 11421

ACKNOWLEDGEMENTS FOR DONATIONS

We gratefully acknowledge donations of shells for our April 2003 auction from the following dealers:

Bruno de Bruin
Don Pizer

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INC.

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The Membership officer should be notified promptly of any change of address.

NEW YORK SHELL CLUB NOTES NO. 365 DECEMBER 2002

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MEETING DATES 2003

MARCH 9---APRIL 13---MAY 11---JUNE 15

WHERE WE MEET

Regular meetings are held on the second Sunday of the month at the American Museum of Natural History, Central Park West at 79th Street, New York City, starting at 2:00 P.M. We use room 319 on the third floor. There are three exceptions; the November trip to the Philadelphia Shell Show, the April Club Auction and Social, and the June meeting held on the third Sunday. Visitors are always welcome.

On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

MARCH 9-CARL EHRLICH, PAST PRESIDENT AND ACCOMPLISHED DIVER, WILL OFFER A PROGRAM ON PACIFIC SHELLS FROM HIS EXTENSIVE COLLECTION.

APRIL 13- THE ANNUAL CLUB AUCTION AND SOCIAL WILL BE HELD AT DOROTHY JENSEN'S BROADWAY DANCE STUDIO AT 31-08 BROADWAY, ASTORIA , QUEENS.

PRESIDENT'S MESSAGE

Dear fellow members,

I appreciate your confidence in entrusting the Presidency of the Club to me. I harbor no illusions that we face some formidable challenges. Today time seems invaluable, use of the internet has replaced face to face to communications. The challenge will be to remain meaningful to our members and attract new members in this much changed social environment.

Quality programs are the key to bringing together our members and to attracting new ones. The primary focus will remain shells and shell related topics. However, recently we have found it more difficult to find speakers and will need your suggestions and in some cases your involvement to be successful. A few members plan to undertake field trips in addition to the the monthly programs and would hope to include individuals who share this interest.

Maintaining a meaninful publication is another challenge. Mike Werner is a staff of one in editing Shell Notes. He clearly needs the support of members in supplying original material if we are not to rely only on recycling material from other publications. However, clippings which supplement his traditional sources are always welcome.

The new club directory will be sent out before the end of March, and will include the members' areas of interest/specialty. Since so many of you have e-mail and are geographically spread out throughout the U.S., I hope this will encourage those of you who may not have known of a fellow member's shared interest to reach out to one another. Following the release of the directory we will start to develop a basic web-site to allow us a presence on the internet where we have been invisible to date. The new generation relies on cellphones and the internet for communication. We need to have at least a modest presence if they are to find us.

There is much to be done. But the quality that attracted me to the Club-- the passion each of us, novice or expert, has for shells, and the willingness of the more knowledgeable among you to mentor the novices----is still there. I and the rest of the Club officers will need your support, energy and ideas if the year is to be a success. I encourage you to e-mail or write me with your ideas, and hope you will find the time to become more involved. I also hope I will have the opportunity of seeing you at our meetings and outings.

Sincerely yours----- Charlie Whitman

HIGHLIGHTS OF THE NOVEMBER OUTING

A dedicated group of NYSC enthusiasts converged at the Academy of Natural Sciences in Philadelphia for the Philadelphia Shell Club's annual show. The New York contingent was joined by Richard Robbins who resides in Washinton. There was something for everyone. For the collector interested in adding to his collection there was a large roomful of offerings from dealers from all over the world . In the second floor gallery the exhibitions from private collectors were elegantly displayed. For those interested in learning more about the second-largest collection of shells in the United States, behind-the-scenes tours were offered by the curatorial staff. We met for lunch to compare notes and departed for home in the late afternoon. Interest in attending has rebounded from prior years' lows and next year we may have to expand the car pool to accommodate it.

HIGHLIGHTS OF THE DECEMBER MEETING

The minutes of the September meeting were followed by brief descriptions of the October shelling trip to Orient Point and the November trip to the Philadelphia Shell Show.

For the election of officers, the Nominating Committee presented the following slate of candidates: President, Charles H.Whitman; Vice President , Carl Ehrlich; Treasurer, Carl Ehrlich; Recording Secretary, Milton Werner; Directors, Romuald Czepulkowski, Al Scarpetti, Larry Potter. There being no nominations from the floor, the slate was elected by a show of hands. A round of applause was accorded Carl for his work as president. Charlie's inauguaral remarks included some of his plans for future activities.

Long-time member Gloria Lipton, who lives in Kingston, N.Y. and had never been able to previously attend a meeting, was present and was introduced.

The speaker was Carl, who described his third shelling trip to Papua New Guinea. It was his third visit there. He and Denise stayed at a resort owned by a marine biologist who serves as a guide to his guests. It is in an area made dangereous by occasional raids by the primitive people of the region. Homes are surrounded by barbed wire and security is provided by men with bows and arrows. As always, Carl timed his visit for a period of moonless nights, which is when marine gastropods are active. A number of his finds were on display, including mitra which are abundant on Mandang Island. Romuald made a few observations on the peoples of New Guinea.

The door prizes were Angaria delphinus, won by Laura Smith; Oliva mineacea, won by Ed Cowles; "Field Guide to the Shells,"(Morris) won by Sandy Kay; "Shells of the World," (Oliver) won by Charlie Whitman; " Shells of North America," won by Larry Potter, and Strombus labiatus, won by Milton Werner. After the meeting members adjourned to Carl's apartment where he hosted a post-500th meeting celebration. Several members who were unable to attend the meeting joined the group for food, drink, viewing of shells from Carl's extensive collection and a chance to catch up with old friends and meet new ones.

THE 500TH MEETING MUG SHOT

Kneeling, Laura Smith (L--R: Sandy Kay, Charlie Whitman, Dorothy Jensen,Al Scarpetti, Carl Ehrlich, Marilynn Lundy, Ed Cowles, Larry Potter, Irv Hoppenwasser, Romuald Czepulkowski, Mike Werner. Photographer: Gloria Lipton

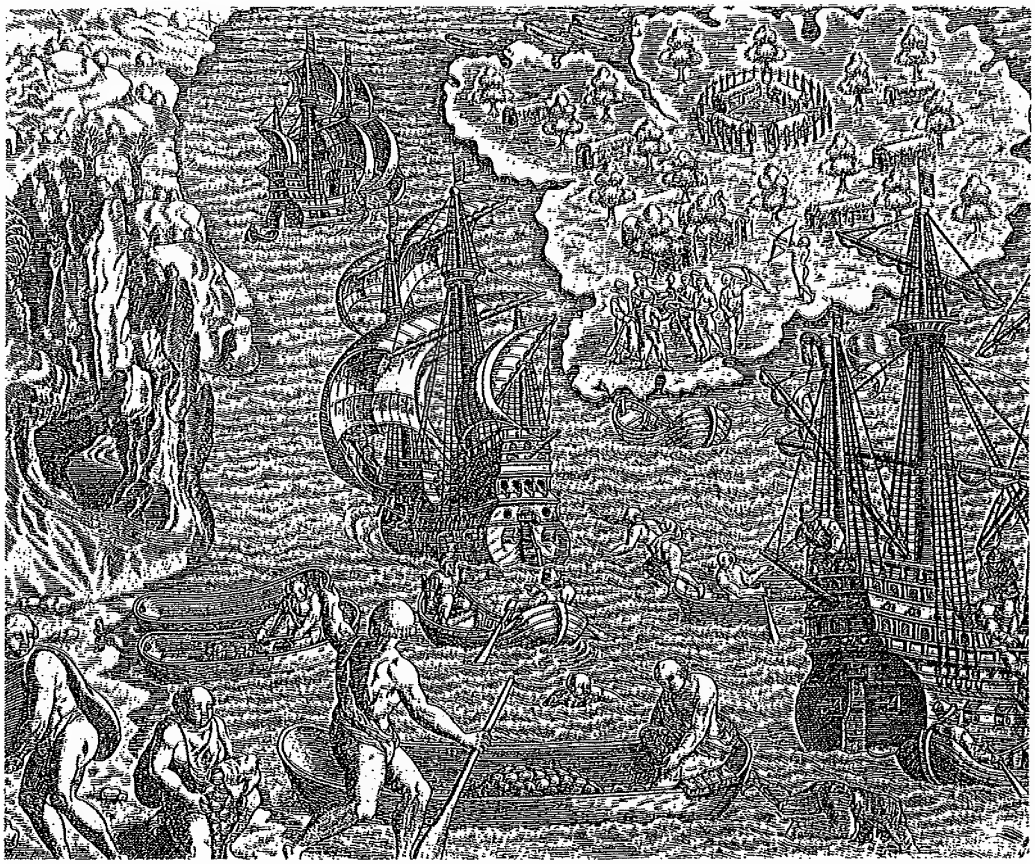
THE REIGN OF PAIN IN THE SPANISH MAIN

The frenzy for pearls that Columbus set off with his discovery of the Pinctada beds of Central and South America brought great gain to Spain, but great pain and little else to the locals. The divers who brought up the oysters were driven beyond human capacity and died young. The nacreous overenthusiam had its effect on the creators of the lustrous concretions, as well.

The story was told in the October 2001 issue of Natural History magazine, to introduce the Museum's recent special exhibit, "Pearls." The article, titled "Columbus's Pearls," written by Neil M. Landman, Paula Mikkelsen, Rudiger Bieler and Bennet Bronson, ends this way:

"As the sixteenth century drew to a close, the known pearl beds of the Americas were increasingly depleted. Between 1513 and 1540, the number of pearls taken from Cubagua alone approached 120 million. Allowing one pearl per ten pearl oysters, this would mean that 1.2 billion oysters were harvested on that part of the Pearl Coast in just twenty-seven years, or approximately 40 million pearl oysters per year. Few species can recover from this kind of assault.

In the succeeding 400 years, there have been attempts to resucitate the Venezuelan pearl industry, but most such endeavors have proved unsuccessful. Pearls are still occasionally found in oysters off the coast of Venezuela, however, a reminder of a time when Spanish ships plied those waters in search of pearls and the New World supplied the Old with an abundance of riches."



In a 1594 engraving, Theodor de Bry depicted pearl fishing off the islands of Margarita and Cubagua. The area was a primary source of pearls in the sixteenth century.

OPERATION GO: THE GOWANUS OYSTER EXPERIMENT SUCCEEDS

(Reprinted from the fall 2001 issue of CityGreen the Newsletter of the Brooklyn Center for the Urban Environment)

Oysters are an integral part of the local ecosystems in and around the New York Harbor, and now they have an important role in science education in the city schools!

More than a year ago we wrote about the launch of Operation Go: the Gowanus oyster experiment, a multi-phase project with significant educational and ecological implications. With a permit in-hand from the New York State Department of Environmental Conservation, Brooklyn Center for the Urban Enviromnent (BCUE) educators, with assistance from aquatic biologists from Long Island's Blue Point Oyster Company, placed 10,000 oyster seedlings from the Crassostrea virginica family in the environmentally troubled waters of the Gowanus Canal which opens off Upper New York Bay.

For the past 15 months seedlings have resided in those unlikely waters, near the Carroll Street Bridge, in an "oyster farm" of two off-bottom culture bags made of fine plastic mesh. The hypothesis for Phase I of the study has been: "The Canal waters--now vastly cleaner since the re-activation two years ago of the Flushing Tunnel from New York Harbor--will allow the American oyster to sustain itself in Gowanus, where it once flourished." To date, Phase I is a success!

Oysters are filter feeders: they open their shells slightly and pull water in through siphons to filter out food. We have found that Gowanus waters are a little too rich, and that suspended particles accumulate on the oysters' shells, making it difficult for them to feed. So BCUE scientists and students regularly scrubbed them down with a stiff brush. The oyster culture bags, and the oysters themselves, were cleaned approximately once every two weeks during the months of July through November, and less frequently during the months of December through March. The scrubbing also caused small chipping of the oyster shell edges, which stimulates and promotes growth.

Throughout Phase I, random samples of 50 oysters were measured for shell diameter. Samples of 100 oysters were examined for mortality. Based upon the findings, it was determined that approximately 5000 oysters survived their first winter in the Gowanus Canal, which is a rate slightly lower than on oyster farms. Those that survived the first year have experienced steady growth over the past months. When the oysters were first measured in June 2000 their average diameter was 18.5mm, about the size of a penny. Some of the oysters are now more than 40mm wide, approximately the size of a fifty-cent piece! Additionally, blue crabs, pink shrimp and killiefish have all been found living in and around the off-bottom culture bags.

Oysters of the same age grown for food in the ideal conditons of an oyster farm on the coast of eastern Long Island would now be several times the size of our Gowanus oysters. However, considering that the Gowanus oysters live only a few yards away from a combined sewage outfall site, where the sewers overflow when it rains, at least they are surviving and growing and more! Perhaps the most important result thus far is that the Gowanus oysters have reached the stage in their life cycle where they can reproduce by releasing eggs and sperm into the waters. To view and monitor this function , BCUE environmental staff brought back a sampling of the oysters and Gowanus water. It is hoped that one day these waters will again permit tiny oysters to float freely as plankton, allowing the native species to be reintroduced.

Part of the success of Phase I has been engaging the interest and energy of students, teachers and community members in using the bivalves as a starting point for guided investigations of the

Canal's history, biology and aquatic chemistry. Dovetailing the experiment with its educational and public programs, BCUE science educators have involved approximately 20 school groups, including teens from the High School of Environmental Studies, Stuyvesant High School and Brooklyn Technical High School, among others, to monitor the oysters' progress. The general public has learned about Operation G.O. on BCUE's ever-popular Gowanus Canal cruises and neighborhood walking tours.

Additionally, this past July BCUE's John C. Muir addressed the National Marine Educators Association at their annual conference in British Columbia on the topic of Operation G.O. and the "possibilities in the muck" of our urban harbors. He was able to report to an amazed audience that even harbor seals had returned to the once-notorious waters of the Gowanus Canal.

Operation G.O. continues to serve as a teaching and learning resource for ecologists, biologists, teachers and students of all ages. It will continue as an incubator for further experiments that encourage support of complex but delicate urban ecosystems. Through student and community monitoring efforts, the Center plans to study the ongoing change in the physical, chemical and biological parmaters of the Gowanus Canal waters. The health of the oysters, as well as other aquatic measures, will provide the data for Phase II of the project. The continued measured growth and life-cycle functions of the oysters will provide an up-to-date data set that will be used by science educators, biologists and young students as a part of an effort to determine meaningful trends and analysis toward future sustainability of this local ecosystem. As the government proceeds to study and plan possible improvements to the Gowanus Canal under the leadership of Gowanus Canal Community Development Corporation, the continuing fortunes of the humble oyster may point the way to the future.

SOUTH FORK NATURAL HISTORY SOCIETY NEEDS DONATIONS OF LONG ISLAND SOUTH FORK SHELLS

Long-time member Sandra Hunter has volunteered to establish a marine shell collection for the South Fork Natural History Society (SOFO), and is in need of donations of shells collected on the South Fork. She has all the common shells, except for Neverita duplicata. The following is a non-exhaustive list of shells that she needs:

Nucula proxima
Hiatella arctica
Cyrtopleura costata
Epitonia- any kind
Most minutiae
Any rarities

SOFO was founded thirteen years ago and is a nonprofit nature organization dedicated to fostering interpretation, documentation, preservation and appreciation of the unique natural world of Long Island's South Fork. SOFO's dream has been to establish a natural history museum on the South Fork. That dream is coming true. It has purchased and renovated a former winery in Bridgehampton to house the museum

Any one wishing to contact Sandra about donations can reach her by telephone at 631-324-6022, or by e-mail at sandrak@hamptons.com.

HALL OF OCEAN LIFE WILL OPEN AT THE AMERICAN MUSEUM OF NATURAL HISTORY DURING THE SUMMER OF 2003.

The new Milstein Hall of Ocean Life will open in the summer of 2003. Those of us who are members of AMNH can attend a members only-preview Friday, May 16, 2003 between 6:00 and 8:30 P.M. We will provide more information on the exhibit and its official opening in the next issue of NYSC Notes.

CONCHOLOGISTS OF AMERICA CONVENTION 2003

The Conchologists of America 2003 convention will be held at the Sheraton Hotel, Tacoma, Washington July 17-21. It will be hosted by the Pacific Northwest Shell Club, Inc. and Of Sea and Shore Publications. Anyone wanting a brochure with the convention information can call Charlie Whitman at 212-861-8211 or e-mail him at chwhit@nyc.rr.com.

THETA LOURBACOS HAS MOVED TO NEW ORLEANS

Theta Lourbacos who was one of the pillars of the NYSC for many years, has moved to New Orleans, La. to live with her daughter Lydia. Charlie received an e-mail from Lydia saying the move to the Big Easy went well, and that her back yard is full of blooming flowers and bird feeders, a far cry from our white winter. Theta's new address is Theta Lourbacos, 6701 W. Magnolia Blvd., Harahan, La. 70123. She can be reached by e-mail at llourbacos@cox.net

---

ELIZABETH RENMAN

March 1902- October 2002

Betty Renman's daughter, in a note to Al Scarpetti, recalls that Betty enjoyed her last birthday party--her 100th. Those of us who knew her as a fellow member and friend are glad to know that she was able to celebrate this milestone in longevity.

Betty was a New Yorker through her first 88 years and her 50 years of marriage. She was an active shell collector who put her knowledge and congeniality to use in her years-long role of assistant in Veronica John's shop, Seashells Unlimited. Through her career years she was an illustrator and medical receptionist. Her last 12 years were spent in Eugene, Oregon with her daughter, Mitzi Snyder. The note thanks Al for his original-art Easter and Christmas cards, which Betty displayed on her wall.

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MEMBERSHIP- CHARLES H. WHITMAN

EDITOR: MILTON WERNER, 70 RICHMOND ST., BROOKLYN, N.Y. 11208

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NEW YORK SHELL CLUB NOTES NO. 366 MARCH 2003

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MEETING DATES 2003

MAY 11---JUNE 15

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

MAY 11-----AL SCARPETTI WILL OFFER A PROGRAM ON "SHELLS AS AN INSPIRATION FOR ART". AL IS AN ACCOMPLISHED ARTIST AS WELL AS AN AVID SHELL COLLECTOR. USING EXHIBITS OF HIS ART HE WILL SHOW US HOW HIS HOBBY INFLUENCED HIS PROFESSION. CHARLIE WHITMAN WILL FOLLOW WITH A PRESENTATION ON SHELLING ON CARRIACOU IN THE GRENADINES. CHARLIE RECENTLY VACATIONED ON THE ISLAND AND WILL MAKE A BRIEF SLIDE AND SHELL PRESENTATION ON HIS BEACHCOMBING THERE.

JUNE 15---- ED COWLES HAS HAD A LIFELONG INTEREST IN THE INFLUENCE OF SHELLS IN THE PRE-COLOMBIAN CULTURES OF CENTRAL AND SOUTH AMERICA. PLEASE JOIN US FOR HIS INTERESTING PRESENTATION ON HOW CERTAIN SHELL SPECIES PLAYED IMPORTANT ROLES IN THE LIFE AND TIMES OF THESE CULTURES. THIS MEETING WILL ALSO SERVE AS THE ANNUAL MEETING FOR THE CLUB WHERE WE WILL ELECT OFFICERS, PROVIDE AN ACCOUNTING OF THE CLUBS FINANCES, AND DISCUSS INITIATIVES FOR THE COMING YEAR.

HIGHLIGHTS OF THE JANUARY MEETING

President Charlie Whitman announced that a current membership list will be published. Visitors Alan Osterweil, Ross Diener and David Rosenfeld were introduced.

The speaker was Mel Springer who described, with narration and slide photos, an arranged shelling tour to Brazil that he and his wife, Sylvia, enjoyed recently. The first stop was Fortaleza, on the northeast coast . Their slides showed the cultural center, restaurants and around-the-town scenes. The major shelling spot was a fishing village name Jerico Accara and nearby localities. It was reached by air, beach buggy to a boat, a truck/bus and ferry barge. Accomodations were a hotel with cabins. On a very wide beach shells were plentiful. The low-tide flats were abrasive coral but productive. One of the sights was the largest sand dune in Brazil, and the locals sand-skiing on it. Two lagoons, the Blue and the Grand, offered good shelling. Even the sandy street offered shells that had been dredged. The townspeople bathe at a well on Sunday mornings. At Cambuco there was also a hotel and good shelling. One find was a live murex, purchased from a small girl. Photos showed some of the haul that the Springers brought back: Marginella, Cassis, Voluta, Cymatium, Murex, Spondylus, chank and some freshwater types.

The door prizes were a Cymatium perryi, won by Larry Potter; Cypraea luteostoma, won by Sandy Kay; a freshwater gastropod won by Ross Diener; Shell Desk Diary, won by Al Scarpetti, and Desk Diary 1984 won by David Rosenfeld.

HIGHLIGHTS OF THE FEBRUARY MEETING

Carl Ehrlich had on display a number of cones and volutes. Two of the volutes illustrated the difficulty of differentiating aulica from vespertilio. He said one has to look for differences in the protochonchs. He also noted the localities, depths and conditions that certain species favor. He added that in areas where people eat mollusks, collecting can be poor. However, there may be very good collecting in an area just beyond canoe range of mollusk eaters.

The speaker was Julia Sigwart, collection manager of the Museum's mollusk department. She opened by announcing that she would be leaving the Museum at the end of the month, to accept a position in the mollusk department of the National Museum of Ireland, at University College of Dublin.

Julia's subject was slugs. Among her first slides was a diagram of the internal parts of the giant, or banana, slug Areolimax. There are four species along our west coast, and they are found in gardens, on streets and in mature forests, but not in replanted forests.

Slugs prefer to start moving at dawn and at dusk. Their range is about four meters, and they make use of their slime trials in finding their way back to the starting point. They will eat anything, even baby trees. While they destroy vegatation , their droppings can result in reseeding. Mushrooms are a favorite food. Their courtship rituals are elaborate and sometimes violent and even fatal. Julia noted that some slugs have vestigial internal shells, and there is speculation that there is evolution at work in both directions.

Carl said that slugs do damage in his Manhattan roof garden, and that a smashed one becomes a center of attraction to others.

The door prizes were Cypraea errones, won by Irving Hoppenwasser; two Oliva ancillaria, won by Marilyn Lundy, and two Viviparus maleatus, won by Milton Werner.

HIGHLIGHTS OF THE MARCH MEETING

Romuald Czepulkowski presented two Shells of the Month. He started by noting that he was just back from a visit to the Bailey-Matthews Shell Museum. The first of the shells was Halioitis tomricei Patamakanthin 2003. The author is a Thai. This "red Haliotis" is about a half-inch long. Romuald's specimen was collected at Olango Island, near Mactan Island, in the Phillipines. He got it about two years ago, unnamed, and eventually saw a description of it in "Of Sea and Shore." Its range is still unknown.

His other shell was Cymatium (Linatella) cutaceum (Lam. 1816). It was brought up by a shrimp trawler from 40 to 60 feet, between Key West and Dry Tortuga. While it is common in the Pacific, it is rare in the Caribbean. Its name is a recent change from Linatella caudata (Gmel. 1791). It was also known a Cymatium singulata (Lam. 1822).

Carl Ehrlich had on display a number of shells unusual for size, condition, etc. They included Conus, Pazinotus, Chicoreus and other muricids.

An attempt to show a tape of a Nova program on the coelocanth was thwarted by a balky TV set. An improptu talk session ensued, led off by Ed Cowles who described a symbiotic relationship between, he assumes, students at Iona College in New Rochelle and slugs. The former discard beer bottles and the latter glide into them for nourishment, and perhaps a buzz. Carl warned about buying shells that are named simply because someone wants his name in the literature. Dealers are happy to make money on such synonyms.

New member David Rosenfeld asked for identification of shells he had collected near Cape Canaveral. He has exhibited shells for school children. He asked for and got advice on choosing display cabinets for shells. Romuald warned against oak, which turns enclosed air acidic, thus eroding shell surfaces. He recalled the British Museum's traumatic, but instructive, experience in a bygone century. Magnificent new cabinets of stout English oak wafted their charged breath on the cowries etc., etc. and a great collection suffered greatly.

The door prizes were two Melongena corona, one a bisect, won by Ed Cowles; Ancillista velesiana, won by Al Scarpetti; two Nerita versicolor, won by Ross Diener; "The Romance of Shells in Nature and Art," won by Marilynn Lundy; "Field Guide to Shells," won by David Rosenfeld, and "Caribbean Seashells," won by Irving Hoppenwasser.

BOOK REVIEW

"Mathilde Weingartner: A Staten Island Naturalist," by Eileen Monreale.

Tillie Weingartner joined the New York Shell Club in its early years and is well remembered by long-time members for her service in official capacities, her engagement in Club activities and her presence in its social life.

The scope of this biography ranges from the personal to Tillie's importance as pioneering naturalist. Reminiscences and observations contributed by her family, friends and associates add color and insight to this well rounded portrayal.

The ecological impact of her career, as both a professional and a tireless volunteer, was recognized with a host of accolades and awards. The following is an excerpt from this understanding view of a woman who made a difference:

"Prior to the mid-century, there had not been a tremendous interest in development on Staten Island because of its distance from Manhattan and its lack of direct access, by vehicle, to another borough. Much of the work that Tillie conducted throughout the 1940s, 50s and, 60s, helped to stop the depredation of natural areas that occurred in the rest of New York City from occurring on Staten Island. By the time development did come rushing in, just prior to completion of the Verrazano Bridge in 1964, Staten Island had many more natural areas than the rest of the city. Tillie had also collected specimens of botany, and other natural history, and maintained natural history notes, begining in the 1920s. These specimens, in many cases, are the only remaining samples of the species. She very effectively created programs to educate the next generation, instilling an understanding of the need to value and preserve land and wildlife. Hers was the pioneering spirit that managed the first outdoor environmental education center on Staten Island, armed only with volunteers and a passion for all things natural.

Tillie's efforts helped preserve the William T. Davis Wildlife Refuge, which at that time was the only wildlife refuge in New York City. She assisted in the preservation of Clay Pit Ponds Park, which is the City's only example of a pine barrens ecosystem, and only state park preserve. Without this preserve, the unique wildlife, including toads, snakes, turtles, salamanders, birds and fish have no other way of surviving."

Paper, 118 pp, 11x81/2, soft, photos. $15 to Club members, payable to the author c/o MBE Publications, 61 Driggs St., Staten Island, NY 10308

MUSEUM WEBSITE

Following is a page from the recently created website of the American Museum of Natural History's department of mollusks (http://research.amnh.org/invertzoo/mollusk/collections/index.html). It is reprinted here for the basic information it provides. Along with an overview of the museum's mollusk collections, it describes recent expansion of the department's facilities and offers internet addresses. Linked pages are devoted to Collections, Malacology, Personnel, Research and Species Lists, with photographic illustration.

Dr. Paula M. Mikkelsen, Curator-in-Charge
AMNH Mollusk Collection

Collections
Malacology
Personnel
Research
Species Lists

Collections

At the American Museum of Natural History we have the third-largest catalogued collection of mollusks in North America. Our collections include an excellent worldwide representation of molluscan specimens for scientific study.
The majority of specimens are dry shells, with a rapidly growing collection of fluid-preserved materials primarily from field work by departmental staff.

Facilities

As of May 2002 our alcohol collections were moved into a new facility within the Museum, the new Starr Natural Sciences building, where specimens are stored in state-of-the-art cabinetry and a climate-controlled environment to ensure collections longevity. In the interest of promoting the field of molecular systematics, we are also increasing our holdings of specimens for molecular analysis with vouchers in the AMNH Ambrose Monell Cryo Collection.
In Fall/Winter 2002, capacity of the dry mollusk collection was expanded by nearly 30% through the addition of 126 cabinets, a long-overdue expansion that will facilitate efficient use by future researchers.

Collections Projects

One of our major ongoing projects, primarily through the efforts of our volunteers, is the assembly of **species inventory lists**. These lists are a reflection only of our collection's current organisation. They are not meant as endorsement of any particular classification, but rather provide a quick reference to our holdings as well as a tool promoting consistency in shelving new materials. In fact, we welcome comments and corrections regarding species names and synonyms. The Species Lists are available on-line through this website (the "Species Lists" button on the header above will direct you to an index of available lists).

Collections Resources

Those interested in management of natural history collections should see the website for the Society for the Preservation of Natural History Collections (SPNHC) at http://www.spnhc.org/.

Anyone interested in the particular protocols used by AMNH Malacology should contact Dr. Mikkelsen (mikkel@amnh.org).

Queries from interested researchers regarding visits, loan requests and/or specimen donations should be addressed to Dr. Mikkelsen (mikkel@amnh.org).
Donors can refer to the Invertebrate Zoology instructions for depositing material at http://

HOW MANY TRIDACNIDAE ARE THERE?

Reprinted from "Of Sea and Shore" Vol. 25 No.2

The Family Tridacnidae, commonly called the Giant Clams, is restricted to the Indo-Pacific area and totals nine species. Threatened by nature, many of the species are now raised in hatcheries, both as a food source and to replenish depleted reefs.

Tridacna crocea (Lamarck, 1819) is the smallest family member and lives in colonies in the upper exposed littoral zone from Thailand to New Caledonia.

Tridacna squamosa (Lamarck, 1819) can reach a length to 40 centimetres and occurs on living or dead stony corals on reefs to a depth of18m from the Red Sea and East Africa to Polynesia.

Tridacna maxima (Roding, 1798) reaches sizes comparable to the last species. It lives in colonies slightly imbedded in the substrate or attached by byssal threads to dead corals from East Africa and the Red Sea to Polynesia.

Tridacna derasa (Roding, 1798) is the second-largest species, with specimens rarely reaching 60 cm. It lives mainly on the outer side of the reef in depths between 4 and 20m and is distributed in Australia, the Philippines, and Indonesia.

Tridacna gigas (Linnaeus, 1758) is the most famous species of the family. The largest recorded specimen is 137 cm and the weight is 230 kilos. It lives in flat sand or broken coral, to depths as much as 20 m. It has become extinct in some of its former range of the entire Indo-Pacific.

Tridacna tevora Lucas, Ledua, and Braley, 1990 is one of the rarest of the family. It lives at deeper depths than other family members, between 14 and 30 m. and is restricted to the islands of Tonga and eastern Fiji.

Tridacna rosewateri Sirenko and Scariato, 1991 is the other rare species from the western Indian Ocean.

Hippopus hippopus (Linnaeus, 1758) the Bear Paw clam, is common living in the reef to depths of 6m off Thailand up to Vanuatu, but has become extinct at Tonga, Fiji and Samoa.

Hippopus porcellanus Rosewater, 1892 is a rare species that prefers sandy patches of the reef and occurs in the South China Sea, the Philippines and Palau.

Above information taken from Daniel Knop's "Giant Clams, A Comprehensive Guide to the Identification and Care of Tridacnid Clams" (1996) a fascinating and very informative and exhaustive review of the family.

DONORS TO THE NYSC ANNUAL AUCTION

We would like to thank the following donors whose generous contributions of shells and other items insured another successful auction for the Club. Dues cover only a small portion of our operating expenses. The proceeds from auction allow us to continue to publish Notes and put on quality programming throughout the year.

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A special note of thanks to Romuald Czepulkowski, who chaired the auction this year and tirelessly put together the auction list and material for the bargain and sales tables; to Dorothy Jensen for the use of the Broadway Dance Studio, and finally to all who labored behind the scenes to make the event a success.

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These NOTES are mailed quarterly to all members. Items and articles for publication in the NOTES should be sent to the Editor.

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NEW YORK SHELL CLUB NOTES NO. 367 JUNE 2003

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WHERE WE MEET

Regular meetings are held on the second Sunday of the month at the American Museum of Natural History, Central Park West at 79th Street, New York City, starting at 2:00 P.M. We use room 319 on the third floor. There are three exceptions: the November trip to the Philadelphia Shell Show, the April Club Auction and Social, and the June meeting held on the third Sunday. Visitors are always welcome.

On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

SEPTEMBER 14-- OUR PROGRAM WILL FEATURE A NOVA DOCUMENTARY FILM ON THE COELACANTH TITLED "ANCIENT CREATURE OF THE DEEP". THIS FISH THAT PREDATES THE DINOSAURS HOLDS TANTALIZING CLUES TO EVOLUTION OF ALL TERRESTRIAL LIFE. THOUGHT TO BE EXTINCT , THE FIRST OF SEVERAL LIVING SPECIMENS WAS DISCOVERED IN 1938. SEVERAL MEMBERS WILL ALSO PRESENT SHELLS FROM THEIR COLLECTIONS.

OCTOBER 12-- GARY ROSENBERG , ASSOCIATE CURATOR AND CHAIR OF THE MALACOLOGY DEPARTMENT AT THE ACADEMY OF NATURAL SCIENCES IN PHILADELPHIA WILL SPEAK TO US ON "WHY DO SHELLS HAVE THEIR COLORS." HE WILL EXPLAIN TO US THE ROLE OTHER THAN CAMOUFLAGE THAT COLORS PLAY IN THE LIVES OF SHELLS.

NOVEMBER 1-- THE PHILADELPHIA SHELL SHOW. THE CLUB ORGANIZES A CARPOOL TO TAKE INTERESTED MEMBERS. WE LEAVE NEW YORK AROUND 8:30 AND RETURN BY 6:30 P.M. PLEASE CALL CHARLES WHITMAN OR CARL EHRLICH FOR DETAILS.

DECEMBER 14-- BY POPULAR REQUEST CARL EHRLICH WILL HOST A SOCIAL FOR CLUB MEMBERS AT HIS APARTMENT . THIS WILL PROVIDE AN OPPORTUNITY FOR MEMBERS TO CATCH UP WITH OLD FRIENDS AND ALSO AN OPPORTUNITY TO VIEW SOME OF CARL'S FABULOUS COLLECTION.

HIGHLIGHTS OF THE APRIL MEETING

The 504th meeting of the New York Shell Club was the annual auction of shells and related materials. As in the past it was held at Dorothy Jensen's Broadway Dance Studio in Astoria, Queens. Viewing started at 11 a.m. and auctioneer Romuald Czepulkowski opened the bidding at 1:00 p.m. He was assisted by Laura Smith, Sandy Kay and Charlie Whitman. Of the 90 shells and books offered, the hottest bidding was generated by :

Conus wittigi, 36 mm ------- $70

29 Conus, small, P.I.----------$52

Cypraea fuscodentata grohorum Lorenz 2002, S. Afr., 33 mm----$50

Perotrochus hirasei, F to F+, Japan, 92 mm-----$50

Pisanianura grimaldi, rare, deep water, Madagascar, 23 mm ----$50

2 Conus dampierensis, F+, Australia, 22 & 26 mm----$48

Afrovoluta pringlei, S. Afr., 90 mm-----$ 36

Conus villepini, Florida, 55 mm---------$ 32

Lyria cloveriana, F to F+, Sri Lanka, 81 mm---$30

3 Scaphella junonia, F, 98, 104 & 133 mm-----$30

Compendium of Seashells, Abbott & Dance, 1st ed.----$30

The Living Cowries, Burgess, 1st ed., $26

Indo-Pacific Mollusca, Vol. 1, nos. 1-6----$ 16

A History of Shell Collecting, Dance, 2nd ed.----$14

The raffle prize was Conus stupella. The door prizes were three books.

Business at the sale and bargain tables, and at the book, magazine and picture table, was brisk. At half-time there was socializing over punch, soda, wine, cake, brownies and pizza.

HIGHLIGHTS OF THE MAY MEETING

The speaker was Charlie Whitman, who reported on a trip to Carriacou, one of the islands in the Grenadines chain in the Windward Islands group, in December, 2002. His slides covered much of the town of Hillsborough, his base of operations. One , taken from the highest point on the island, 850 feet, took in the town's harbor and Hillsborough Bay beach, where he did most of his collecting. Harbor scenes showed the boats that are built locally. Part of the inviting atmosphere of the island is that tourism is kept low. The food staple is conch. Charlie fell in with longtime club tradition by ending his picture show with a sunset.

Charlie distributed copies of his list of more than 90 species that he came back with. His identifications were made with the help of Susan Hewitt and Romuald Czepulkowski. Carl Ehrlich augmented Charlies's presentation with a display of shells that he had collected in the Grenadines and Granada, mostly cones and murex. Cones from Carriacou show the paleness in color that is common in cedonulli. Two of his Murex oculatus are unusually large.

The second presenter was Al Scarpetti, who displayed 38 of his shell paintings, which will be among examples of his work that will soon be the subject of a showing in a New York gallery. Those he displayed were done in ink and tempura, on art board and paper. Al's paintings represent a broad range of shells in both natural and stylized settings and show his love and understanding of the subject matter. It was a pleasure to have this talented artist and member share his work with us.

The door prizes were Strombus luhuanus and Turbo chrysostoma, won by Marilyn Lundy, and Arca zebra , won by Larry Potter.

HIGHLIGHTS OF THE JUNE MEETING

Al Scarpetti returned the Club's copy of "Mathilde Weingartner: A Staten Island Naturalist," and Larry Potter was the next borrower.

Charlie has been serving, by agreement, as president since Carl Ehrlich was granted approval of his wish to step down to vice-president and treasurer . Charlie has taken the reins in both hands, and June being our election month, the Nominating Committe proposed that he be formally elected. Carl was nominated to his dual post, Milton Werner as recording secretary, and Al, Larry, and Romuald Czepulkowski as directors. Al will serve as program chairman. The slate was elected unanimously. Charlie said that our major challenge for the year is setting up a website.

The Shell-of-the-Month was Cittarium pica, represented by a size series collected by Charlie on his recent trip to Carriacou. It was noted that it hasn't been seen in Florida waters for many years. This lead to a discussion of shells that turn up in habitats where they don't live--- by happenstance or mischief.

Romuald displayed a Spergo fusiformis, a rare shell that was once placed in Volutidae. It is now recognized as a turrid. The specimen came from the Mozambique Channel. The species is also found in Japan.

The speaker was Ed Cowles, who accompanied his talk with slides taken in Mexico City, Acapulco and Vera Cruz. His interest in pre-columbian art frequently finds him photographing sculptures and paintings that feature, or include, shells. Some have spiritual significance, or recall historic events. Ed's slides also included scenes and shells, many live. One was a Thais from which local people extract a purple dye. Their method doesn't involve the sophostication of the process that conjures royal purple out of murex. In Mexico. poking with a stick does the job.

The door prizes were a juvenile Conus nobilis victor, won by Milton Werner, and Cardium (Fragum) unedo, won by Irv Hoppenwasser.

MILSTEIN HALL OF OCEAN LIFE REOPENS

The following is an excerpt from the American Museum of Natural History's publication "Rotunda" Vol. 28, No. 3 May/June of 2003.

One of New York City's grandest spaces, the Museum's beloved Hall of Ocean Life, reopens this May after a major renovation. Current scientific research and cutting-edge exhibition technology have been combined with the restored Beaux-Arts elegance of the exhibition halls.

The 29,000-square-foot hall is still dominated by the famous blue whale, one of the Museum's star attractions, which now floats in a "virtual ocean" created through dramatic lighting, video, and sound effects that include whale songs. The 94-foot female--the largest model of the largest animal on Earth--has been modified to reflect current scientific knowledge of living blue whales. She now has a more streamlined area around the eyes and a more svelte, tapered tail. Above the whale, skylights gently illuminated by shimmering blue lights contribute to the illusion of being submerged in the depths of the sea.

Exhibition designers have fabricated over 600 new models, ranging from tiny green bubble algae to a 14-foot whale shark to computerized bioluminescent fishes and invertebrates. Joining the renovated ocean dioramas created in the 1930s abd 1960s will be an 18 x 8-foot wall of video combining high-reflection footage of undersea life, animations, graphics, and an evocative soundtrack that will transport visitors further into the heart of the ocean realm.

The classic dioramas on the lower level have been cleaned and restored, with new lighting brightening areas formerly obscured.

In particular, the spectacular Andros Coral Reef diorama, the only two-level diorama in North America, underwent a complete overhaul to resore its vibrant colors, to enhance visibility of the maze-like coral reef, and to reveal the wonders of this exremely threatened ecosystem.

Two new "Spectrum of Life" walls flanking the entrance to the hall link the exhibits to those in the adjacent Hall of Bioversity. They highlight the extraordinary diversity of marine life and reinforce the idea that all life is conncted through an intricate web of evolutionary and ecological relationships. One wall depicts a profusion of invertebrates and plants. Interactive computer stations in front of each wall provide details about the biology and taxonomy of the organisms represented on the wall, as well as information about their "place" in the ocean.

Life on Earth emerged in the oceans and much of it stayed there--scientists estimate that 80 percent of all living organisms may live under water. Over 70 percent of the Earth is covered with water and yet very little is known about the complexity and diversity of life in the oceans. What is known, however, is that the oceans play a vital role in supporting life on Earth. The aim of the renovation of the Milstein Family Hall of Ocean Life is to open a window onto the spectacular ocean ecosystems, to bring current scientific knowledge about the oceans to the public, and to reveal the diversity of this, Earth's final frontier.

The Milstien Family of Ocean Life was designed, developed, and produced by the Museum's Exhibition Department.

Among the museum's curators who contributed to its creation are Dr. Paula Mikkelsen, Assistant Curator, Division of Invertebrate Zoology and Dr. Neil H. Landman, Curator, Division of Vertebrate Zoology.

LANDSNAILS ENDANGER JETS

Henk B. Miene
Of Sea and Shore Vol. 25 No.2

Recently I received, for identification, a sample of landsnails which had been collected from the landing strip of Ramon Airbase in the Negev (desert), Israel, by a ranger of the Israel Nature and National Parks Protecton Authority (INNPPA), on 20th of December 2001. A second sample was received from the Plant Protection and Inspection Service (PPIS) of the Ministry of Agriculture and Rural Development, which had been collected from the tarmac of the same airbase on 7th February 2002. Both samples belonged to Xerocrassa seetzenii erkelii (Hygromiidae). According to the ranger a similar situation existed that winter on the Hazerim Airbase. However, the snails found on the latter landing strip belonged to a different subspecies, Xerocrassa seentzenii seentzenii.

It appeared that thousands of these snails invaded the landing strip that winter, each time after a heavy rainfall. In doing so they created a three-fold dangerous situation for the planes during take off and landing in at least three ways:

--the numerous crushed snails cause slippery conditions on the runaways;
--the snails lying on the tarmac were sucked into the engine;
--the snails attracted numerous birds such as crows and ravens, bustards and stone curlews, which fed on them. This happened during both day and night, causing near-collisions with the planes.

At the time the snails caused the problems, the landing strips were bordered by small bushes and a number of annuals. The snails invaded the runways from these areas. The use of herbicides to combat the vegetation and molluscicides to control the snails was more or less ruled out beforehand since the airbases are surrounded by large nature reserves. Moreover, rangers of the INNPPA are supervising the control of pest species at the airbases.Therefore an environmentally friendly solution for combating the problem was proposed, to spray the sides of the landing strips with a highly concentrated solution of brine. Brine will not only control or suppress most of the vegetation, or cause a replacement of the latter by less attractive salt-loving plants, but it will also prevent the snails from moving from their natural habitat onto the tarmac. In Israel brine is available in unlimited quantities from the nearby Dead Sea Works. It is a cheap material and actually it has already been used for years in the prevention of dust forming on upaved roads in the Negev. Unfortunately, I do not know whether the proposed solution has actually been applied at the airbases.

PUSHING TO BUILD A BETTER BANDAGE

LOWLY SHELLFISH MAY PLAY A LIFESAVING ROLE IN THE BATTLE

by Brian Libby
The New York Times, March 4, 2003

For all the emphasis placed on technology by the American armed forces, until recently, dressing the wounds of soldiers had advanced little in the hundreds of years. "If I were to compare dressings in the Civil War and what we had five years ago," said Lt. Col. Anthony Pusiteri, a physician with the Army Institute of Surgical Research, "it was really just about the same."

But now the military says it may have some new products that can save thousands of soldiers who until now would have bled to death in the field awaiting treatment. Three products are being investigated for possible large-scale military use. One is a dressing developed by the Red Cross over several decades. Another is a granular material called Quick Clot that can be poured into wounds. The third, which may hold the most promise, is a hemostatic bandage approved in November by the Food and Drug Administration only 18 months after discovery. The bandage is made of shrimp cells and was developed by an Oregon institution that is mainly devoted to lasers.

Dr. Kenton Gregory, head of the Oregon Medical Laser Center in suburban Portland, is a chemical engineer and physician who specializes in developing biomaterials, particularly replacement tissue from natural proteins, as well as using lasers to treat ailments like cancer and heart disease. Dr. Gregory and his colleagues were asked two years ago to address the military's longtime desire to find a better bandage. "We tested everyting we could," Dr. Gregory said. He and his team examined numerous patented products and most commercial bandages. The bandage being developed by the Red Cross, for example, takes clotting proteins from human blood, and uses its clotting enzyme to speed the process. The technique, which is not yet approved by the F.D.A. has drawbacks. For example, it can set off an allergic reaction, it relies on an already-low blood supply, and so far has proved too brittle for a durable bandage.

The bandage developed by Dr. Gregory and his team solves many of the problems in the Red Cross bandage, they say. Bleeding is a leading cause of death on the battlefield, and thousands of lives could have been saved with this dressing made of highly absorbent chitosan.

As described in the Journal of Trauma in January, the chitosan bandage is derived from chitin, a biodegradable carbodydrate found in the exoskeletons of countless animals, particularly, shellfish. Chitosan, the second -most-common substance in the planet's biomass, after cellulose, is also a polysaccharide, not a protein. As such , it will not cause an allergic reaction.

Although chitosan has virtually the same chemical structure as cellulose, it is a polysaccharide with a positive charge. When paired with the negative charge of red blood cell's outer membranes, opposites attract, Dr. Gregory said. As a result, a clot is formed independent of the body's normal clotting procedure. Colonel Pusateri of the Army Research Institute believes that the key to the chitosan bandage is its adhesive quality, but Dr. Gregory is adamant that the bandage literally has the power to create its own clot, even among those with hemophilia.

Regardless of how its done, the chitosan has held up to more bleeding than it was intended to take. In its own testing, the Army successfully stopped vast internal bleeding and reported that its subjects (pigs with lacerated livers) survived at least the hour specified, even though the dressing was originally intended for external hemorrhaging. That durability gives patients more time to reach treatment centers.

Chitosan has long been known for its clotting abilities, but it had never been made into a reliable product. "You could use chitosan to control minimal bleeding, but no one ever built a durable bandage that could control the type of of hemorrhage that we're talking about," said Dr. Bill Wiesmann, a developer of the bandage and the former head of combat casualty care for the Army. Dr. Gregory said that his team's task was to create a bandage that would "work at minus-50, equivalent to the Artic, plus 140, the Sahara" and, he added, "I decided yoiu have to be able to to drive a Humvee over it."

The technology could have ramifications far beyond the armed forces. Bleeding is a leading cause of death in trauma cases among civilians as well, and it accounts for an overwhelming majority of operating room deaths in trauma patients. One neurosurgeon, for example, has requested advanced access to the bandage for an operation to remove tangled blood vessels in the brain, a procedure that carries a high risk of death from bleeding.

Dr. Gregory and his colleagues have formed a company called HemCon to produce the bandage for the Army, and they expect commercial production geared toward civilian hospitals to begin in summer or fall. For now, the Army has ordered 20,000 of the bandages. "There is something like 70 million E.R. visits a year for bleeding,"Colonel Pusateri said. "It's a huge problem. After all, everybody bleeds."

2003 SHELL FALL AREA SHELL SHOWS

November 1-2 PHILADELPHIA SHELL SHOW, Philadelphia, Pa.
Held at the Academy of Natural Sciences, Parkway and 19th ST.
For information call Al Schilling 215-886-5807 or E-mail:
alsch@bellatlantic.net

PARK SERVICE VETERAN TAKES HELM OF JAMAICA BAY

By Jon Kalish - The New York Sun

Jamaica Bay, the city's 13,000-acre ecological gem off Brooklyn and Queens, has just been given its own caretaker. Retired National Park Service ranger Don Riepe, who lives on the bay, has taken the helm of a shiny new 22-foot power boat dubbed the Oystercatcher I. " It's the best of both worlds,"said Mr. Riepe, 63. "I have nature in my back yard and the cityscape in the distance.

Mr. Riepe ,who grew up in Ozone Park, Queens, heads the American Littoral Society, an environmental group he runs from his one-story clapboard home on the water's edge.

"It's an incredible sanctuary full, of life,"Mr. Riepe said. "It's a critical migratory habitat, and a place in the city where people can get a sense of solitude, and commune with nature."

Mr. Riepe worked in the area for the Park Service as a ranger and biologist for 25 years, before retiring in February from what he described as an " ideal job."

Jamaica Bay is part if Gateway National Recreation Area and is home to a 9,000 acre wildlife refuge of salt marshes and hundreds of species of birds and fish.

(Ed. note— Don Riepe has been a guest lecturer at the Club)

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NEW YORK SHELL CLUB NOTES NO. 366 MARCH 2003

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MEETING DATES 2003

MAY 11---JUNE 15

WHERE WE MEET

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

MAY 11-----AL SCARPETTI WILL OFFER A PROGRAM ON "SHELLS AS AN INSPIRATION FOR ART". AL IS AN ACCOMPLISHED ARTIST AS WELL AS AN AVID SHELL COLLECTOR. USING EXHIBITS OF HIS ART HE WILL SHOW US HOW HIS HOBBY INFLUENCED HIS PROFESSION. CHARLIE WHITMAN WILL FOLLOW WITH A PRESENTATION ON SHELLING ON CARRIACOU IN THE GRENADINES. CHARLIE RECENTLY VACATIONED ON THE ISLAND AND WILL MAKE A BRIEF SLIDE AND SHELL PRESENTATION ON HIS BEACHCOMBING THERE.

JUNE 15---- ED COWLES HAS HAD A LIFELONG INTEREST IN THE INFLUENCE OF SHELLS IN THE PRE-COLOMBIAN CULTURES OF CENTRAL AND SOUTH AMERICA. PLEASE JOIN US FOR HIS INTERESTING PRESENTATION ON HOW CERTAIN SHELL SPECIES PLAYED IMPORTANT ROLES IN THE LIFE AND TIMES OF THESE CULTURES. THIS MEETING WILL ALSO SERVE AS THE ANNUAL MEETING FOR THE CLUB WHERE WE WILL ELECT OFFICERS, PROVIDE AN ACCOUNTING OF THE CLUBS FINANCES, AND DISCUSS INITIATIVES FOR THE COMING YEAR.

NEW YORK SHELL CLUB NOTES NO. 368 SEPTEMBER 2003

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COMING EVENTS

December 14-- David Doubilet one of the world's leading underwater photograpers and Photographer-in-Residence at the National Geographic Society will speak to us on "Water light time: A look at the world's Oceans ". The program will include some of Mr. Doubilet's stunning slides. We are hosting this event in the Linder Theater at the American Museum of Natural History at 2:00 P. M. The event will be followed by a social for Club members at Carl Ehrlich's apartment at 4:15 P.M. The address is 314 W. 22nd St. , Apt. 4. This will provide an opportunity for members to catch up with old friends and also an opportunity to view some specimens from Carl's fabulous collection of marine shells.

January 11- to be announced

February 8-- Rich Kelly, member of the Long Island Shell Club and veteran shell collector will speak to us on the family Columbellidae. With slides and specimens he will tell us about the species in this family and some of the taxanomic issues involved.

HIGHLIGHTS OF THE SEPTEMBER MEETING

Romuald Czepulkowski had on display 14 lots of Cymatidae from the Caribbean, Brazil, Sri Lanka, Cebu and Samar. The species included martinianum, macrodon, intermedium, aquatile and pileare. He noted that many check lists mistake other species for pileare. His array showed how color within species differs, in some cases, according to locality. He added the note that many Caribbean species are named for Kevin Sutherland, a Florida collector who makes good use of his shrimp boat in acquiring specimens.

The day's program was a showing of a video of the PBS Nova episode, "Ancient creatures of the Deep". The subject creature is the coelocanth, a fish that predates the dinosaurs. No living specimen was seen by man until 1938 when fishermen brought one up from 300 feet, in the Indian Ocean of South Africa. The film gives due attention to the stir created by the discovery among scientists and science buffs. Fossils of the coelocanth have been found in all continents except Antartica. A second live specimen was recovered 14 years after the first, in the Comoros Islands, north of Madagascar. A later recovery, in Indonesia, proved to be a new species, a term that seems inappropriate in speaking of the coelocanth.

The door prizes were Vasticardium alternatum, won by Charlie Whitman; Strombus tricornis, won by Hal Kaplan, and Tellina virgata, won by Sedra Varga.

SPONGE'S 'FIBER OPTICS' BETTER THAN MAN-MADE

ASSOCIATED PRESS-- AS PRINTED IN THE PRESS OF ATLANTIC CITY, N.J.---8/21/03

Scientists say they have identified an ocean sponge living in the darkness of the deep sea that grows thin glass fibers capable of transmitting light at least as well as industrial fiber optic cables used for telecommunication.

The natural glass fibers also are much more flexible than manufactured fiber-optic cable that can crack if bent too far.

"You can actually tie a knot in these natural biological fibers and they will not break---it's really quite amazing," said Joanna Aizenberg, who led the research at Bell Laboratories.

The glassy sponge, nicknamed the "Venus flower basket,"grows the flexible fibers at cold temperatures using natural materials, a process materials scientists hope to duplicate in order to avoid the problems created by current fiber-optic manufacturing methods that require high temperatures and produce relatively brittle cable.

The sponge also is able to add traces of sodium to the fibers which increase their ability to conduct light, something that cannot be done to glass fibers at the high temperatures needed for commercial manufacturing, Aizenberg said.

"One of the challenges of technology is doping the glass structure with additives that improve optical properties," she said. "If we understand exactly how we can deposit sodium in glass fibers at low temperatures as nature does, we can control all the properties."

The sponge grows in deep water in the tropics. It is about a foot and a half tall with an intricate silica mesh skeleton that also serves as a home for shrimp.

The glass fibers form a crown at its base that appear to help anchor the sponge to the ocean floor. The fibers are about 2 to 7 inches long and each is about the thickness of a human hair.

The study, which appears today in the journal Nature, details one of the latest discoveries in the emerging field of biomimetics.

DAVID DOUBILET, WORLD RENOWNED UNDERWATER PHOTOGRAPHER, WILL BE SPEAKER FOR DECEMBER 14TH.

David Doubilet, one of the world's leading underwater photographers, will be our speaker at the December 14th meeting of the NYSC. The lecture will be held in the Linder Theater at the American Museum of Natual History at 2:00 P.M. and will be on "Water Light Time: a Look at the World's Oceans, and will include slides.

Mr. Doubilet has shot over 6o stories for the NATIONAL GEOGRAPHIC MAGAZINE, his most recent being "Cuba Reefs: A Last Caribbean Refuge," in the February 2002 issue. He has photographed the underwater world broadly, reporting from the Red Sea on flashlight fish, shark-repelling flounders, creatures of the undersea desert, and the flourescence of coral in ultraviolet light as well as the coral environment of the Red Sea. He has documented the richest coral life in the world in Indonesia and Papua, Guinea, and produced stories on the Great Barrier Reef, as well as whale sharks, crocodiles and deadly box jellyfish. A documentary recently aired on the Discovery Channel chronicled Mr. Doubilet's collaboration with Peter Benchley in an in-depth look at the great white sharks.

Mr. Doubilet is a Contributing Photographer-in-Residence of the National Geographic Society, and produced several books: Light in the Sea: An Undersea Journey, Water Light Time, and The Great Barrier Reef, published in 2002.

Join us and bring your friends to what will be an outstanding event. The Linder Theater seats 150 . The Club does not charge admission for the event. Club members can enter the Museum free of charge by showing their New York Shell Club card. Guests will have to pay the Museum admission fee.

EXCERPTS FROM A TALK GIVEN BY FRANK LLOYD WRIGHT TO APPRENTICES OF THE TALIESIN FELLOWSHIP AND REPRINTED IN HOUSE BEAUTIFUL,NOVEMBER, 1955.

THE TITLE IS "LET THE WONDERFUL INFINITE VARIETY OF SEA SHELLS INSPIRE YOU WITH FAITH IN YOUR OWN INDIVIDUALITY."

This morning boys, I want to give you a little lesson in housing. I will show you what housing amounts to in nature, and what a good place nature is to go if you really want to study housing.

Look carefully at these hundreds of beautiful, infinitely various little houses (Mr. Wright shows the apprentices a tray full of sea shells). Here you see housing on a lower level, it is true, but isn't this humble instance a marvelous manifestation of life? Now, where, in all this bewildering variety of form, is the idea? Is there not just one idea or principle here? But where is the limitation to variety? There is none.

Speaking of human housing, here is a good lesson that you young architects may now get. If the human mind is so limited that it can take in only some special one (pointing to one shell), what we now need to see is that we must inform ourselves, if we really want to develop a culture of our own, so that we can perform similar "miracles" (pointing to them all) in order that we do not have to submit to those impositions by code or formula, in the name of science or authority, which impose a living death on our performances.

Here, in these shells, we see housing of the life of the sea. It is housing of a lower order of life, but it is housing with exactly what we lack: inspired form. In this collection of houses of hundreds of small beings, who themselves built these houses, we see a quality which we might call invention. The beauty of their variation is never finished. Creation here goes on forever. It is not a question of degree, but of principle of design. This multitudinous expression indicates what design can mean.

There is no reason why our buildings and the housing of human beings, which we so stupidly perpetrate all alike as two peas in a pod, shouldn't be quite as fertile in imaginative resource as these little sea shells. Why do we ever take to any one formula, carry it out to a dead end, and execute it as though that were all? Here in this collection of little houses is one of the best lessons you could possibly find. Study them.

There is but one generic principle here: All these little shell-houses are doing the same thing, but not in the same way. This one (a clam shell) is based on the opening and shutting of the house. Two halves hinged together. These and many others without hinges--are they of a higher development, or being less mechanical, are they inferior? Or the reverse? Can you see how all these lines and forms in all these colors and textures are tributary to the forces which are being exerted from within as the shell is being made, or, we might say, designed?

Every ornamentation, that is to say, every pattern, you see here, and the exquisite forms of the shells themselves, are tributary to the force being exerted by its like upon itself from within, as the growing shell is being made. Probably this one grew in coral beds, where the very shape and decoration of the thing was a feature of the preservation of its life, keeping its inhabitant from destruction by alien forces. That was true generally of these more exclusive cellular shells.

Look at this fantasy! (Mr. Wright holds up a striking shell). Here is an original! All these infinitely variable forms are saying exactly the same thing. No interior change in the idea, yet here is another and another and another individual. Here you may see what individuality might mean in a democracy. If you want a lesson in organic structure and decoration, here it is. And what colorations, what beautiful, textured color! Always, in these forms, in these little poems, there is the ebb and the flow, the plasticity of the elements by way of which, and in which, they came to exist. They are natural, you see. These little things are lovely in their own way. Beautiful. All of them. Some of them are still young, growing up perhaps, the species still a becoming.

Here, for instance, is a beautiful form of principle at work. Every single one comes to a different conclusion, wherever it may start or whatever the harmony may be. Yet, see the variety of means to ends? When you get the simple secret of this inner life of the thing, why that thing is what it is, and why a certain aim does persist in all these various shells of this or any other type of life, that means you have the secret of differences in a family, differences that mean various races--true dissidence, in other words.

See the great, seemingly utter difference between these two shells! What in common do they have? Here we see reinforced shells, evidently due to a scarcity of raw materials. Here we see the reinforcing rib, instead of the heavier mass, the outer-wall-bearing pattern. The pattern here is seemingly predestined to purpose, since these shells are the children of movement---the movement of the sea and the sand. Why can't we be as fertile in our work? Where should we go to study the inner forces that have such wide consequences?

SNAILS, DESIRED FOR BEAUTY AND VENOM, MAY BE THREATENED

BY HENRY FOUNTAIN (NEW YORK TIMES, OCTOBER 21, 2003)

For centuries, cone snails have been objects of desire, their intricately patterned shells valued by collectors. More recently, the carnivorous snails have become prized for something else: their potent mix of toxins, which biomedical researchers say hold promise in drug discovery and medical treatment.

But researchers are now warning that the world is in danger of loving cone snails to death. In a letter to the journal Science, three scientists say that collection practices for ornamental trade and medical research, coupled with habitat destruction through pollution and global climate change, pose an extinction threat to these animals. Without monitoring and controls on trade, they warn, many of the roughly 500 cone snail species could be lost before their value to humans is known.

"We're alarmed that we may be losing the genus that has more potential medicines than any other in nature," said Dr. Eric Chivian, an author of the letter and director of the Center for Health and the Global Environment at Harvard Medical School.

Cone snails eat other mollusks, worms and fish by injecting their prey with venom through a sharp, hollow toothlike appendage. This venom is a deadly cocktail, estimated to contain 50 to 100 short chains of amino acids, or peptides, for each species. This means there are potentially as many as 50,000 of these peptides, kown as conotoxins, available to medical research, Dr. Chivan said.

Of these, he said, only about 100 have been investigated so far. Many are tantalizing because they been found to bind with specific ion-channel receptors, the holes in cell membranes that allow for chemical changes to take place that can cause or halt disease. "What these toxins do pretty much better than anything else is plug these holes with incredible specificity," said Dr. Aaron S. Bernstein, an author of the letter and a visiting researcher at the Harvard Center.

"This selectivity and sensitivity translates into an important tool for medicine," Dr. Bernstein said. Among other things, he said, conotoxins could form the basis for new drugs that are so receptor specific they might avoid some side effects of other medications. A strong synthetic painkiller based on a peptide found in one species, Conus magnus, is already in the late stages of clinical trials.

Contoxin research, however, requires that quantities of snails be collected from coral reefs, mangrove swamps and other shallow waters to obtain even a small a small sample of venom. Dr. Chivan cited a research laboratory at an American university, which he declined to name, that imported 10,000 venom glands from China for one project.

But commercial collection for the ornamental trade is probably a worse problem, said Dr. Callum Roberts, a marine conservation biologist at the University of York in Britain and the third author of the letter. Collected by the millions, the shells show up in gift shops around the world, where they often sell for a few dollars each. “The value we attach to them as ornaments is vastly lower than the value to society of their medical uses,” Dr. Roberts said.

The narrow geographic range of many of these species makes them particularly fragile. Dr. Roberts said his analysis showed that, for example, there are eight species that exist only in the Philippines. Species that geographically limited in this way are “more likely to go extinct through localized impacts on the environment,” he said.

Those impacts can come from environmental changes as well. Pollution and rising ocean temperatures have damaged or destroyed coral reefs around the world in recent years.

Dr. Baldomero Olivera, a professor of biology at the University of Utah and a cone-snail researcher, said the environmental effects were probably more of a concern than overharvesting. In his lab, he said, he uses common snail species that are widely distributed. “ I don’t think there’s a great danger as far as harvesting them,” he said.

Dr. Chivian said that in studying the issue, they could find no shell-exporting nation that regulated or even monitored the trade. At the very least, he and his co-authors recommended, monitoring should occur under endangered species laws.

“People have no idea what the status of these species is in the wild,” Dr. Roberts said. “It’s not likely to be good.”

2004 SHELL SHOWS & RELATED EVENTS

- Following advanced information is subject to change. Please verify with individual organization -

Jan. 17-18 **CENTRAL FLORIDA SHELL SHOW**, Orlando, FL
Central Florida Fairgrounds, Exhibition Hall A, 4603 W. Colonial Drive
Helen Kwiat, 1329 Sterling Oaks Drive Casselberry, FL 32707
E-mail: dekwait@netscape.net (407) 695-3881

Jan. 24-25 **SPACE COAST SHELL FESTIVAL**, Melbourne, FL
The Melbourne Auditorium, 625 E. Hibiscus Blvd.
Jim & Bobbi Cordy, 385 Needle Blvd., Merritt Is., FL 32953
E-mail: corshell@earthlink.net (321) 452-5736

Jan. 30 - Feb 1 **BROWARD SHELL SHOW**, Pompano Beach, FL
Pompano Beach Recreation Center, NE 18th Av. & NE 6th St.
Jim VunKannon, 2219 NE 16th Court, Ft. Lauderdale, FL 33305
(954) 561-0120

Feb. 13-15 **SARASOTA SHELL SHOW**, Sarasota, FL
Sarasota Municipal Auditorium, Tamiami Trail
Lynn Gaulin, 4407 33rd Ct. East, Bradenton, FL 34203
E-mail: shellhunter@att.net (941) 755-1270

Feb. 20-22 **NAPLES SHELL SHOW**, Naples, FL
The Nature Conservancy, 14th Avenue N.
Gary Schmelz, 5575 12th Ave. SW. Naples, FL 34116
E-mail: schmelz@att.net (941) 455-4984

Feb. 27-29 **ST. PETERSBURG SHELL SHOW**, Treasure Is., FL
Treasure Is. Community Center, 1 Park Place
Bob & Betty Lipe, 348 Corey Avenue, St. Petersburg Beach, FL 33706
(727) 360-0586; FAX: 360-366
E-mail: rlipe1@tampabay.rr.com. Exhibits accepted at web site:
http://web tampabay.rr.com/shellclub

Feb. 28-29 **XVIème RECONTRES INTERNATIONALES DU COQUILLAGE**, Paris, France
Bourse de Commerce, 2 rue des Viarmes, 75004 Paris, France
(Note: new venue for 2004)
M. & D. Wantiez, 88, Rue du General Leclerc
95210 Saint Gratien, France
E-mail: wantiez.mada@libertyserv.fr 33 (1) 34-17-00-39

Mar. 4 - 6 **SANIBEL SHELL SHOW**, Sanibel, FL
Sanibel Community Center, Periwinkle Way
Anne Joffe, 1163 Kittiwake Circle, Sanibel, FL 33957
E-mail: Sanibel@aol.com (239) 472-3151

Mar. 11-13 **MARCO ISLAND SHELL CLUB SHOW XXIII**, Marco Is., FL
Wesleyan United Methodist Church, Barfield Road
Jean Sungheim, P.O. Box 633, Marco Island, FL 34146
(941) 642-7247

Mar. 20-21 **FIFTH AUSTRALIAN NATIONAL SHELL SHOW**, Morphettville, S. Australia
Morphettville Race Course
Wayne Rumball – (8) 8381-3987, fax: (8) 8387-4956
Peter Hunt – (8) 8387-6492
E-mail: hunt.trottpk@chariot.net.au

May 8 - 9 **XIV BELGIUM INTERNATIONAL SHELL SHOW**, Antwerp, Belgium
Sporthal Schijnpoort, Schijnpoortweg 55-57, Antwerpen
R. De Roover, Vorsterslaan 7, 2180 Ekeren-Donk, Belgium
E-mail: bvc.deroover@village.uunet.be 32 (3) 644-3429

Jun. 27 - Jul 2 **CONCHOLOGISTS OF AMERICA ANNUAL CONVENTION**, Tampa, FL
Grand Hyatt Tampa Bay, 6200 Courtney Campbell Causeway, Tampa, Florida
Betty Lipe, 11771 96th Place, Seminole, FL 33772-2325, USA
E-mail: rlipe1@tampabay.rr.com (813) 391-2197

Jul. 11-16 **UNITAS MALACOLOGIA – World Congress of Malacology**, Perth, Australia
The University of Western Australia, Perth, W.A.
Dr. Fred Wells, Western Australia Museum
Perth 6000, W.A., Australia E-mail: wellsf@museum.wa.gov.au

Jul. 17-18 **Jacksonville Shell Show,** Jacksonville Beach, FL
Days Inn Oceanfront Resort, Jacksonville Beach
Charlotte Lloyd, 1010 N.24th St., Jacksonville Beach, FL32250
challoyd@bellsouth.net (904) 246-0874

Jul. 17-18 **Keppel Bay Shell Show,** Yeppoon, Queensland, Australia
Jean M. Offord, 277 McDougall St.,
N. Rockhampton, Qld. 4701, Australia (7) 4928-3509

Jul. 24-25 **Townsville Shell Show**, Townsville, Queensland, Australia
Cutharinga Bowls Club on Harold Street, West End
Glenda Rowse, 19 Farrell Street, Kirwan 4814, Queensland, Australia (7) 4773-2817

Jul. 31– Aug 4 **American Malacological Society Meeting,** Sanibel, Florida
Sun Dial Resort, W. Gulf Road
Dr. Jose Leal, Bailey-Matthews Shell Museum
Sanibel-Captiva Road, Sanibel, FL 33957
E-mail: jleal@shellmuseum.org (239) 395-2233

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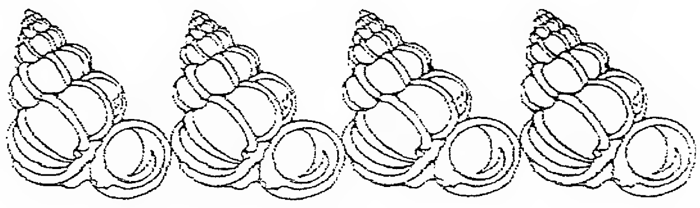

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COMING EVENTS

MARCH 14-- OUR SPEAKER WILL BE LEONARD BROWN WHO WILL SPEAK TO US ON WENTLETRAPS. CO-AUTHOR OF THE DEFINITIVE BOOK ON EPITONIDAE, MR. BROWN WILL GUIDE US THROUGH THE INTRICACIES OF THIS FAMILY WITH OVER 500 SPECIES.

APRIL 18--- NEW YORK SHELL CLUB ANNUAL AUCTION. DUE TO A CONFLICT WITH THE RELIGIOUS HOLIDAYS WE HAVE MOVED THE AUCTION TO SUNDAY, APRIL 18TH. SEE THE ENCLOSED LETTER FOR MORE INFORMATION.

HIGHLIGHTS OF THE OCTOBER MEETING

The Shell-of-the-Month, presented by Romuald Czepulkowski, was chosen to complement the theme of the day's presentation-- color in shells. The shell was Conus mindanus. Four specimens showed the striking range of color in the species, made the more remarkable because the four had been collected in the same place and at the same time.

The speaker was Dr. Gary Rosenberg, chairman of the Dept. of Malacology in the Philadelphia Academy of Natural Sciences. His topic was"Color in Shells." He noted that in certain shells some or all of the color is in the periostracum, and in some species on the inside of the shell. It is thought that the presence of color may add strength to shell material. As for camouflage, he noted that many colorful shells show predators only a monochrome periostracum, and that some predators are color-blind. He mentioned the wide ranges of color and pattern in Nerita and Donax and described the crystalline shell structure that creates iridescence. He said that the reason why tropical shells are the most colorful may be because their environment, over the millennia, has been more stable. He also said that in some cases color may serve as an advertisement. The blue-ringed octopus, for example, may be telling the world, "I'm poisonous, so leave me in peace." A long question and answer session followed.

Two of those present were Valerie Layton and her daughter Vanessa, visiting New York from Maine. Valerie is a long-standing member, now attending a meeting for the first time.

The door prizes were Paphia graffei, won by Oliver Kostrenski; Conus nobilis victor, won by Gary Rosenberg, and a melanistic Strombus urceus, won by Milton Werner.

Romuald presented a second Shell-of-the-Month--- actually several. They were an array of albino and melanistic shells. He also noted that certain areas of India are notable for color abnormalities.

HIGHLIGHTS OF THE NOVEMBER MEETING

The NYSC organizes its annual visit to the Philadelphia Shell Show in lieu of its regular meeting at AMNH. Two cars ferried members down to the Academy of Natural Sciences. One group left at the crack of dawn, timed to arrive at the opening of the show and with the intent of having first call on the impressive array of shells displayed by dealers from all over the world. The second less materialistic group left at slightly more civilized hour and arrived in time to peruse the dealers' stalls and enjoy the shell exhibits and behind-the-scene tours of the Museum's collection of shells, the second-largest in the United States. Our Washington member Rich Robbins joined the group. All felt that there was something for everyone and that it is an event not to be missed.

HIGHLIGHTS OF THE DECEMBER MEETING

The 510th meeting was held in the Linder Theater of the musuem because the speaker was David Doubilet, the world-famous underwater photographer. Heavy snow throughout New York State threatened to cancel the program. However, Mr. Doubilet gamely started out from Syracuse at 6:30 in the morning and fought his way through to the museum. Knowing he would be late, he cell-phoned progress reports to President, Charlie Whitman and his eager audience.

Charlie greeted members and guests at 2:00 p.m. knowing that there was much time to be filled. Carl Ehrlich met the emergency by sendng his wife, Denise, to their home 55 blocks south to fetch

some shell slide photos. They filled the time productively until Mr. Doubilet's appearance at 3:17 p.m.

David, whose pictorial artistry is well known to readers of National Geographic Magazine, showed and commented on a selection of fascinating images including scenery, fish and even a few shells. His close-ups of chambered nautilus were intimate introductions. Along with bizarrely colored, patterned and shaped fish, his subjects included sharks, eels, sea horses and manta rays displaying their sinous grace. A subcategory, Fish Faces, brought the viewer eye-to-eye with countenances and mugs ranging from the amusing to the appalling.

The final segment of the presentation took us on a tour of the pearl industry--- Hong Kong, Japan, Tuomotu, Tahiti and Australia. David's slides and commentary covered the natural and cultured pearl industries, implanting methods that induce pearl creation, the science of farming that protects the growing oysters and pearls, and the calamities of nature that can wipe out years of work. He described differences in methods and yield in the places visited, and the sources of the colors that are becoming more popular among pearl buyers. He also noted that the ongoing efforts to produce ever-larger pearls have yielded beauties as large as 20mm in diameter.

Following a question-and-answer session members made the 55 block trek to the Ehrlich residence for a Yule-season buffet.

HOW DID YOU EVER GET TO PUBLISH YOUR ARTICLE , ANYWAY?

By Allen Aigen

I have been asked to let the NYSC know what I am doing with my research into the evolution of the genus ***Fasciolaria.*** However, a summary of the evolution of the family got too technical for these Notes, so I will answer the title question instead. I have been collecting seashells scientifically since I was 13, and have a Master's degree in paleontology (although I never used it professionally). So I have a good background for understanding fossil shells and their history on Earth, but I am still an amateur in the best sense. (Amateur comes from the same root as love, i.e. to work for the love of it, not for money.)

I had been collecting fossil shells in southern Florida for years before I felt that I had anything new to add to our understanding. I started asking for information on collecting localities and was taken under the wing of Phyllis Diegel. She got me started, introduced me to Ed Petuch, and has been a constant source of encouragement. But she is just one of many people (professional and amateur) who have generously helped me put together an understanding of the fossils and their geological history, who have edited many drafts of my articles, who have photographed shells, allowed me access to their collections and libraries, and guided me in my efforts. It takes many people to make a good article, and the shell community is very encouraging toward anyone who wants to do original research, and to publish.

The first article I published in American Conchologist (Mid-Pleistocene Left Handed Whelks from Southern Florida, December 2000, Vol. 28, no.4) was a short study of left-handed whelks from an early ice-age locality. Ed Peutuch had named a form that occurred there that had a thick shell and coarse cording. It was easy to name specimens that corresponded to that form, but I also found many specimens there that had weaker cording and thinner shells, grading evenly to nearly smooth thin-shelled forms. Since other fossil speicies I had studied had similar wide variability,

with only the extreme variants getting a name from Petuch, I thought that it would be useful to document this instance.

Next I put together a study of the olive shells from the same locality (Some ***Oliva*** species of the Mid Pleistocene of southern Florida. American Conchologist, June 2001, vol. 29 no.2). This study was also very limited, just trying to clarify the identities of the species present, three of which were inadequately named by Petuch. I found that the olives are too complicated to do original studies without doing myriad measurements under a microscope and crunching numbers through a computer! I also needed samples of the many forms that Petuch named if I was to expand the study beyond one locality. To get type specimens, you must have them sent to a researcher in a museum or university, which makes for difficulties.

My most ambitious article (Fascilaria species (Tulip Shells) of the Pliocene to Recent of Southern Florida, American Conchologist, December 2002, v.30, no.4) was also restricted, but in it I formally put many of Petuch's species in synonymy (with references in the Zoological Record, so it can't be ignored as "amateur" work .) This study started earlier than the olive article, when I tried to decide the identity of a bunch of small tulip shells from the same locality. There were narrow forms with strongly sculpted early whorls and broader forms with weak sculpture. The end forms were easy to identify, havng been named by Petuch. But the broader forms could not be neatly separated from the narrow. I measured the number of sculpted whorls and the spiral angle of a few dozen shells and plotted them on a graph. They formed a smooth line, without separation. Plotting in similar forms from other areas broadened the line, but did not resolve into the named forms. Later, when I tried to identify the other ***Fasciolaria*** forms in my collection from other times and areas, I realized that almost all the fossil forms were badly over-split, and I decided (with the encouragement of professionals) to formally synonimize them. At first I did not want to deal with the Recent forms at all, as there were too many forms, which no one agreed as to their status, and I had no specimens to work with. After much study of the literature, and access to the collection at the Academy of Natural Sciences in Philadelphia, I was able to put the recent forms into an evolutionary pattern with the fossil forms, in a family tree. I also tried to make the geological framework make sense to people with a weak background. But I was basically studying species only in south Florida to put a limit to the study so I could finally get it finished. Attempting to do a perfect job prevents many people from doing an adequate job.

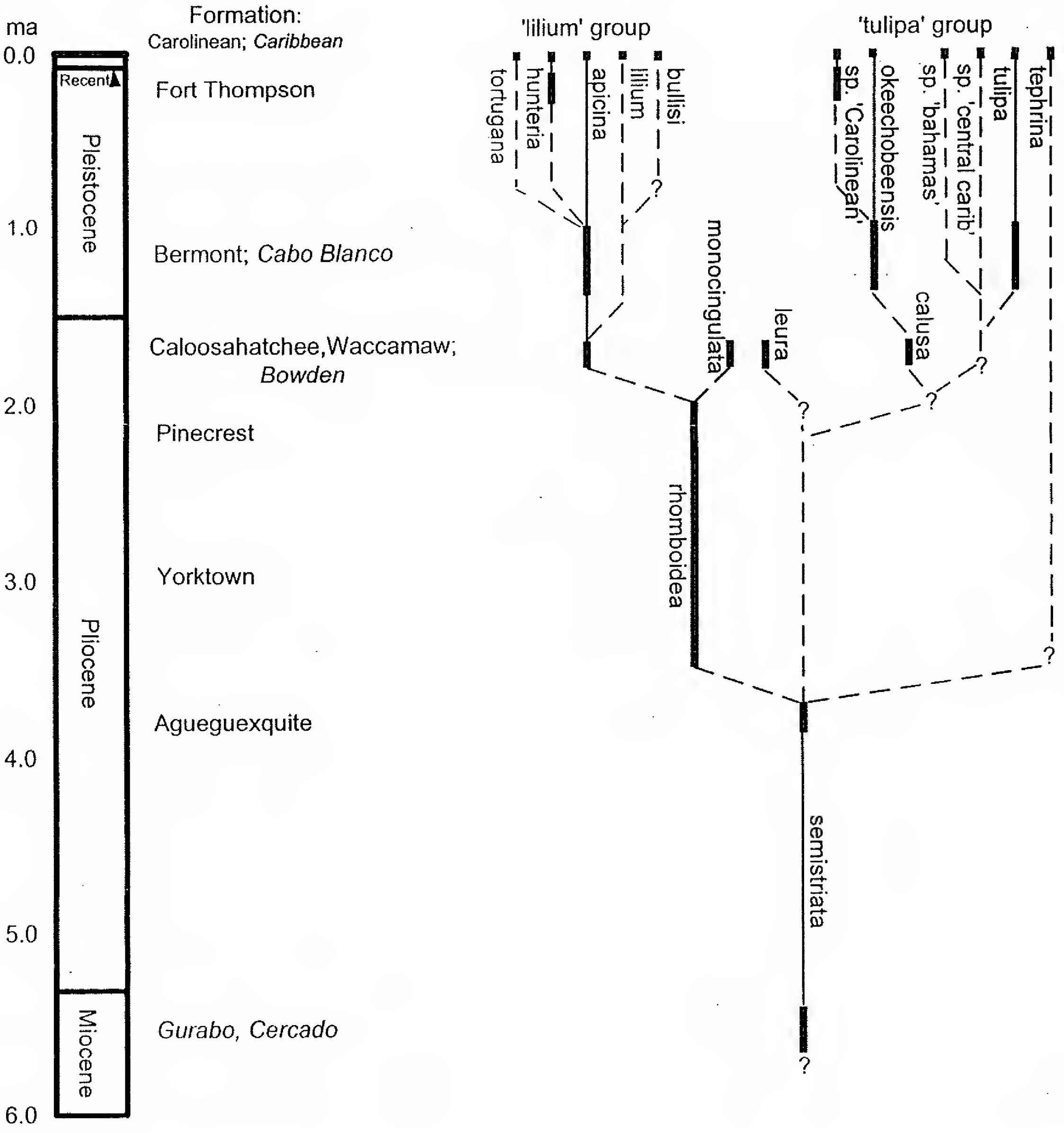
As soon as I finished writing I started doing an expansion of the study. I measured specimens in the Paleontologic Reseach Institution in Ithaca, N.Y., in the American Museum of Natural History and in the Academy of Natural Science, trying to refine my understanding of the genus throughout the Western Atlantic. I received photos of the Linnaean syntypes of ***F. tulipa***. I also have been doing Internet research and trying to get articles and books I need to understand what I am doing. (Since I have a full-time job and two young children I have less time than I would like, but I am happy to progress in small spurts, slowly. It gives me time to think through all the implications of what I say.) I put together hypotheses and try to disprove them. I write and rewrite (thanks to a word processor), although I type slowly. I send out copies of the drafts for help from the experts. I am very happy to change things, as it is usually for the better.

So wither ***Fasciolaria*** ? There are 16 species that I consider valid, only five of which are probably extinct. (I elevated all the forms that I feel are valid into species level, based on occurrences of Recent forms.) Most references have only about six current species or subspecies with vague status. I have put, or will be putting, about nine names into synonymy, and pulling a few older names back into use. I hope to be able to put a valid, well defined name onto every specimen that

I can see. However, I may not be able to prove all my hypotheses; I may need to wait for DNA or other soft-part studies to support or destroy my ideas. For example, there are two species incorrectly called ***F. tulipa*** living in Florida. There are at least three species in that complex in the Caribbean. There are six ***Fasciolaria*** species living now in the Yucatan, including forms thought to have been extinct.

If anyone wants a summary of my current understanding, e-mail me at Serirach@juno.com

FAMILY TREE OF THE GENUS FASCIOLARIA



DEVELOPERS BUYING THE BEACH TO A SCUBA SANCTUARY IN QUEENS

NEW YORK TIMES--- OCTOBER 1, 2003-- BY COREY KILGANNON

From dry land, Almost Paradise does not exactly resemble an exotic diving spot. A sliver of beach sits unceremoniously on a dead end , just south of Kennedy Airport in Queens. There are housing projects, an elevated subway and overgrown parking lots nearby. From the psychiatric home next door, onlookers often heckle the divers lumbering toward the water laden with wet suits, air tanks and weight belts.

The scene underwater, however, is anything but urban. Several yards past where the asphalt ends, there is an unusually deep natural lagoon filled with marine life. Even now, the water temperatures still hover around 70 degrees and there is an array of tropical fish more befitting Caribbean reefs: triggerfish, parrotfish, queen angels and others washed up by the Gulf Stream.

Since it opened 10 years ago, Almost Paradise, between Beach Eighth and Beach Ninth Streets in Far Rockaway just west of the Atlantic Beach Bridge, has become one of the most popular diving spots in the Northeast, and certainly the city's most prominent. It is less than an hour's drive from Midtown Manhattan; some dedicated divers have been known to take the A train.

Tens of thousands of New Yorkers have earned their diving certifications at this hidden jewel at the easternmost tip of Rockaway Beach not far from the ocean. But within a matter of days, this diving mainstay will become a lost paradise. The landlord is selling the waterfront plot to a developer later this month. His tenant, Jay Velazquez, who owns Almost Paradise, says he will shut his doors on Oct. 15.

Mr. Velazquez, who opened Almost Paradise 10 years ago, charges divers a $17 fee to park and use his showers, changing rooms and equipment rinsing areas. He also has an affordable restaurant menu and bar that attracts divers and land-lubbers alike.

"Nobody knows what to do," said Kirby Kurkomelis, 50, who owns Sea Hunt dive shop in Woodmere, N.Y. , and has been diving and teaching at Beach Ninth Street for 40 years. "There are thousands of people who are quite upset because there's nothing anywhere in the city like that 50 yards of beach."

The property is being bought by several investors from Nassau County, who plan on demolishing the restaurant and redeveloping the property for residential or commercial use, said Meir Roth, a Cedarhurst lawyer representing the buyers. He said there were no specific plans yet, except to build something that would "profit both the investors and the community." But, he said, it is unlikely the plans will include a diving spot.

"I wish I had the money to buy the property," Mr. Velazquez said last week in between frequent phone calls from disconcerted divers hearing the news. "I feel like this spot really belongs to the divers. There's going to be thousands of them with no place to go." He said he pays dearly for an insurance policy against possible death or injury to divers, neither of which has ever happened.

Many diving shops, schools and organizations, including the scuba rescue units at New York's Police and Fire Departments, go into the water from Almost Paradise. And many of the divers say they will continue to do so, simply entering the property below the high water mark, which they say is legal.

"Whoever moves in, we'll cooperate if we can, but we're going to access the water somehow," said Di Dieter, who owns Atlantic Divers in Gravesend, Brooklyn. Mr. Dieter, 63, said he had been taking diving students to Beach Ninth Street for 40 years.

Alfonso Vernieri, 54, a retired sign hanger who has also been diving Beach Ninth Street for 40 years, said he would dive the spot no matter who owns it. "This is my water," he said. "Unless they put guards on the beach with guns, I'll keep diving here."

Mr. Vernieri said he had dived off Montauk, Martinique and Islamorada in the Florida Keys. But he still gets excited by swimming with harbor seals in the Rockaways, as well as five-foot-long stingrays and the 12-foot beluga whale that hung around the area for a while. "You can't compare it to spots with 200-foot visibility,"he said, "but I'd rather spend the whole summer diving here for pennies than spend thousands for a week somewhere else."

It was back in 1993 that Mr. Velazquez, a former used-car dealer, converted a ramshackle bait shop into a three-table restaurant on the beach. He fenced off the property and began charging $5 a day to park and use his facilities. Many old-timers scoff at paying, preferring to slip into the water from adjacent properties. But Mr. Velazquez says he has gotten at least 2,000 divers each year.

On a clear day, water visibility is more than 10 feet. Two underwater jetties serve as artificial reefs, attracting plenty of fish. They also provide divers with a refuge from the strong currents in the inlet. Divers are assisted by several cables running into the water and there are several cages of thick metal bars that serve as underwater "classrooms" for divers to demonstrate and practice procedures.

There are the usual local fish, like flounder, striped bass, bluefish and blackfish, as well as lobster. And there is a wide array of plant life, including sponges and soft corals. But divers can also swim with tropical fish including butterfly fish, sergeant majors, spotfins, angelfish, damselfish, groupers, squirrelfish, trumpetfish, and other non-native species that die by November when water temperatures drop below 60 degrees.

Mr. Dieter said he gets a kick out of taking first-time students to the spot. "I love hearing them say, where in the world is he taking us? because it's not exactly the most aesthetically pleasing place," he said. "But once they start diving, they can't believe the life and beauty down there. To be able to see the tropicals come in on the Gulfstream, it's amazing."

Mr. Kurkomelis says he will try to unite diving instructors who use Almost Paradise and circulate a petition to ask the city's Park Department to allot some of Rockaway Beach for divers. Otherwise, he said, "I'll still dive that spot; I'll just have to walk in somewhere else."

ANNOUNCEMENTS-- SHELL SHOWS

The 67th Annual Sanibel Shell Show will be held March 4-6, 2004 at the Sanibel Community Center, Sanibel, Florida.

Central Florida Fair will held February 27 to March 7. The Central Florida Shell Club has again been invited to participate in their Creative Arts Exhibit, in building A (the Shell Show Building).

The 2004 Conchologists of America Anual Convention will be held Saturday June 26 to Friday July 2 in Tampa Bay, Florida.

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Individual Membership---------------	$12.00 per year
Family Membership ------------------	$15.00 per year
Corresponding Membership---------	$10.00 per year
Foreign Membership-----------------	$12.00 per year(U.S. $)

The Membership officer should be notified promptly of any change of address.

NEW YORK SHELL CLUB NOTES NO. 370 MARCH 2004

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WHERE WE MEET

Regular meetings are held on the second Sunday of the month at the American Museum of Natural History, Central Park West at 79th Street, New York City, starting at 2:00 P.M. We use room 319 on the third floor. There are three exceptions: the November trip to the Philadelphia Shell Show, the April Club Auction and Social, and the June meeting held on the third Sunday. Visitors are always welcome.

On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

JUNE 20-- OUR MEETING IN JUNE WILL BE HELD ON THE THIRD SUNDAY OF THE MONTH IN ROOM 319 AT AMNH AT 2:00 P. M. WE WILL FIRST HAVE A OUR ANNUAL MEETING AND PRESIDENT'S REPORT . IT WILL BE FOLLOWED BY SPEAKER CARL EHRLICH WHO WILL SHOW SLIDES AND SHELLS FROM HIS LATEST DIVING TRIPS TO THE CARIBBEAN AND PAPUA-NEW GUINEA. ROMUALD CZEPULKOWSKI WILL BE THE SHELL-OF-THE-MONTH PRESENTER. THERE WILL ALSO BE DOOR PRIZES.

THE FALL LINE-UP OF EVENTS WILL BE PUBLISHED IN THE JUNE EDITION OF NOTES.

HIGHLIGHTS OF THE JANUARY MEETING

The program was a swap session, but most of the attention focussed on a display of Cymbiola that Carl Ehrlich had collected in March, 2002. On the table were 10 specimens of C. (Cymbiolacea) pulchra, one perplicata and two pulchra excelsior. This subspecies, Carl said, was named only recently and is very rare.

Carl also brought two species of Conus that he had collected in March, 2002, live. A leopardus that he described as extraordinary in size was found at 3 to 5 meters on sand near a reef off Nha Trang, Vietnam. A betulinus, also large, and also at 3 to 5 meters on sand near a reef, was found at Dong Hai, Vietnam.

The shell-of-the-month, presented by Romuald Czepulkowski, was actually two - Cymatium vespaceus and C. comptum. They are hard to tell apart, and Romuald gave these distinguishing features: comptum is lighter in color and never has any gray. Its revolving cords are always single, whereas in vespaceus the cords are double where they cross the varices. Also, vespaceus has a more slender protoconch, and comptum has fewer knobs between varices.

Carl invited everyone to dry-collect from a box of Terebra that he had collected off La Paz, Baja California.

HIGHLIGHTS OF THE FEBRUARY MEETING

The shell-of-the-month, presented by Romuald Czepulkowski, was actually three, all turrids. They were Toxiclionella (Caliencrula) elstoni, Bathytoma viabrunnea and a Drillia species from the Philippines that has not yet been described.

The door prizes were Liguus fasciatus, form emicostaneus, won by Rich Kelly; Epitonium scalare, won by Sandy Hunter, and Mitra ferruginea, won by Milton Werner.

The speaker was Rich Kelly whose subject was the family Columbellidae - dove shells. He described the family as seemingly designed to be collected. It can be found in almost every geographic area, it inhabits a wide range of depths starting at shallow, it's variable through a tremendous range of species, the shells are small, are easy to clean, not fragile and colorful. However, despite the availability and attraction of this segment of the superfamily Muricoidea, there are no books devoted to the family, and not much other literature.

Rich, who has 297 species of columbellids in his collection, mentioned the following among its locales: Singapore, Australia, Hawaii, the Galapagos, the Philippines, Indonesia, India, Cape Verde, South Africa, Brazil, Qatar, Malta, Nova Scotia, Alaska, and Washington state and Florida.

NOTES ON NOMENCLATURE AND LABELING

by Walter Sage -American Museum of Natural History

The major difficulty many of us have in constructing our shell show displays is labeling. Good, accurate labels in correct form enhance even a mediocre exhibit while nothing can detract so quickly from an otherwise outstanding exhibit as poor labels.

Walter Sage has judged many shell shows himself and has conferred with malacologist Dr. R. Tucker Abbott, and Dr. William K. Emerson (also of the AMNH) before offering the following advice and enlightenment:

Zoological nomenclature dates from Linnaeus's 1758 Systema Naturae, 10 th edition, and is based on one name for a genus and another for species. (This is binominal nomenclature: a combination of two names, a binomen. Note the difference between binominal and binomial, as in the Binomial Theorum: two numbers,)

So that these scientific names are easily recognizable, General Recommendation 2 of the ICZN Code (the International Code of Zoological Nomenclature, 1985 revision, hereafter cited as Code) states, "the scientific names for taxa of the genus and species groups should be printed in a typeface different from that used in the text. Italics are usual. When typing or hand writing customarily use underlining instead of Italics because Italics are not available (and because underlining is a printer's instruction to set words in Italic type). Computer-generated labels are acceptable, but we must be careful that the printing for scientific names is different from the rest of the data on the label. All scientific names should be underlined. Each scientific name should be treated as separate entity, and should be underlined separately. The subgenus is considered a "genus- group" and should be underlined just like the genus, as well as being placed in parathensis.

INCORRECT
Scaphella (Volutiformis) aguayoi (Clench, 1940)
Scaphella (Volutiformis) aguayoi (Clench, 1940)
Scaphella (Volutiformis) aguayoi (Clench, 1940)
Scaphella (*Volutiformis*) *aguayoi* (Clench, 1940)

CORRECT
Scaphella (Volutiformis) *aguayoi* (Clench, 1940)
*Scaphella (Volutiformis) aguayoi (*Clench, 1940)

Use and placement of the comma in the citation of a scientific name can be confusing, so again we quote the CODE, Recommendation 22A (Q): " In citing the date of publication of a name , an author should interpose a comma between the name of the author and the date." For example, *Conus marmoreus* Linnaeus, 1758.

It is a more complicated citation when author and date are used, but this is NOT mandatory. What is important is consistency --- if you are citing author and date for each species included in your display, then be sure to have the labels uniformly correct. Misspellings and typographical errors detract materially from an exhibit.

Another point to mention is the use of parentheses to indicate that there has been a change in generic placement of a species-level name. The CODE, Article 51(c), states, "If a species-group name is combined with a generic name other than the original one , the name of the author of the species-group name, if cited, is to be enclosed in parentheses." Recommendation 22B extends this practice to include the date. "If the original date of publication is cited for a species-group name in a changed combination , it should be enclosed within the same parentheses as the name of the original author." For example, in 1804, Lamarck described the Junonia as *Voluta junonia:* it has more recently been assigned to the genus group *Scaphella:*

INCORRECT
Scaphella junonia Lamarck, 1804
Scaphella junonia (Lamarck) 1804

CORRECT
Scaphella junonia (Lamarck, 1804)

Mere forms and variations have often been given Latin names in the past, and Latin names are quite frequently proposed as new forms (*forma*) today. These names, however, are called "infrasubspecific," that is , below the level of subspecies, and they are not considered within the official rules of priority of homonymy. Thus, one may identify a red color phase of a shell as :

Scaphella junonia (Lamarck, 1804) form (or *forma*) *rubra* Smith, 1970
Strombus luhuanus subspecies *decorus* Roding, 1798 form *ruber* Smith, 1970

One further note: The CODE, Article 27, forbids the use of apostrophes, hyphens or accent marks of any sort in Latin names, but does permit them in names of authors such as Müller, Röding, and Milne-Edwards.

YOU TOO CAN BECOME A MARINE HABITAT!

Wouldn't you like to hobnob daily and intimately with your favorite marine creatures? Even better, as part of an artificial reef you could provide shelter and sustenance to sea life of all kinds, including the fascinating phylum whose shells you collected and treasured while you were alive. Yes - you do have to become dead to enter such an enclave of Elysium. This will probably impose certain restrictions on your delight and delectation, but none on the efficacy of your contribution.

News of this opportunity comes to us via The New York Times, in its Business section, Jan. 11, 2004. An article on environmentally friendly burials (no embalming fluid, metal coffins or large headstones) ends this way:

"Those who prefer the water to dry land can turn to Eternal Reefs, a company based in Atlanta that mixes cremated remains into cast concrete to create artificial reefs. Since 1998, the remains of about 300 people and one dog have been submerged at one of 11 sites.

"They actually become part of the reef," said Don Brawley, Eternal Reefs' founder and president, who also was co-founder of the Reef Ball Development Group, which makes synthetic marine habitats.

Mr. Brawley came up with the idea for eternal reefs after his father-in-law asked that his remains be mixed into one of Reef Ball's modules. "He said, I would rather spend eternity with all that life down there than in a field with a bunch of dead people," Mr. Brawley recalled. "The next thing you know, everybody was asking us to do it. And it has blossomed up from there."

Loved ones of the deceased can participate in every step of the process, from choosing the location of the reef to accompanying it on a chartered boat to its final resting place. Prices range from $995, to become part of a community reef with several commingled remains to $4,995 for an individual reef."This is good for the families and good for the soul, " Mr. Brawley said. "The baby-boomer generation wants to give something back. Things are changing; this is going to be the next big thing."

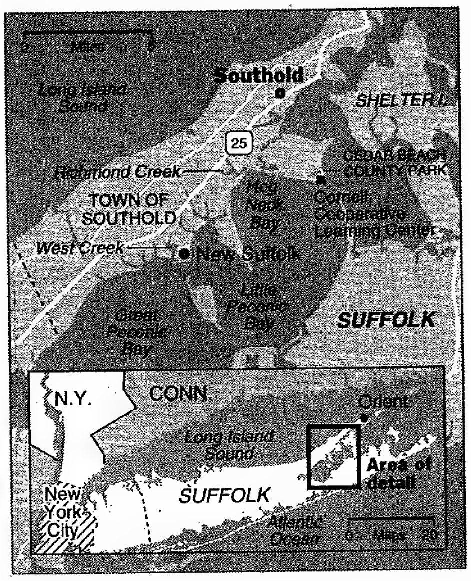
LURED BY SHELLFISHING, BUYERS SEEK CREEKFRONT SITES

by Carol Paquette -- New York Times, April 20, 2003

When Bill Rich , a Manhattan lawyer, decided to retire in 1997, he moved to his [Long Island] summer home in Orient at the tip of the North Fork and began looking for property, to build his new year-round residence.

He had one stipulation. It must be on one of the creeks in the town of Southold that are open year-round to shellfishing, because he wanted to grow oysters.

The town has 22 inland creeks, most open to shellfishing in all four seasons and most feeding into bays between the North and South Forks. Because of federal water quality regulation, however, creeks with marinas are closed permanently to shellfishing and those with beaches are closed during the summer.



After researching which creeks were open year-round, Mr. Rich purchased a one-acre parcel along West Creek in New Suffolk, on Southold's south shore. In creating his building plans, he had the 4,000 square-foot house angled to face the property's 180 foot-wide creekfront.

Mr. Rich is one of an increasing number of people looking to buy waterfront property who have been drawn to the North Fork creeks, realtors say. In purchasing along these creekfronts, many have been attracted by a new community program that allows them to cultivate their own oysters, clams and scallops while restoring the town's shellfish beds.

"There are certain people who look particularly for creekfront, for the shellfishing and the diverse wildlife, and who feel the views are more interesting," said Robert Scalia, an owner of Century 21 Agawam Albertson Fine Homes and Estates.

"Creekfront is an interesting market that has exploded over the past two years, much faster than bayfront," he said. "The creeks are still attainable, but the prices of bayfront houses, which have always been 10 to 30 percent higher, have skyrocketed to over $2 million. This is all tied directly to the scarcity of buildable lots because of new coastal regulations."

At the new home of Bill and Carol Rich, wide windows and doorways open to a view of West

Creek, where there are still 600 of the 2000 oysters that they "planted" two years ago as dime-sized seeds -- or juvenile shellfish -- and which have grown to five inches long.

The seeds were provided by the nearby marine environmental learning center operated by the Cornell Cooperative Extension of Suffolk County, after Mr. Rich told Kim Tetrault, the extension's educator and an aquaculture specialist, that he wanted to grow oysters.

Mr. Rich became one of three homeowners who helped found a nonprofit community-based shellfish restoration effort that is now operated by the extension, known as the Southold Project in Aquaculture Training, or more simply SPAT. The program is at the marine center, adjacent to Cedar Beach County Park on a peninsula that stretches into Little Peconic Bay in Southold.

According to Mr. Tetrault, who is the program's director, SPAT hopes to help restore the shellfish industry in the Peconic Bay area, which was almost completely wiped out in the late 1990's after years of overharvesting, pollution and the invasive algae called brown tide, which prevents the shellfish from feeding.

Over the past 10 years, the center has annually planted more than six million oyster, clam and scallop seeds in Southold waters, a number it hopes to double through the new community program, Mr. Tetrault said.

Since SPAT officially began two years ago, 250 Southold property owners have enrolled, each annually growing at least 2,000 oysters, the mainstay of the program."SPAT's goal is to build a healthy seed that would enhance the program and teach the community to be better stewards of their environment," Mr. Tetrault said.

The creeks in the 54 square-mile town of Southold are owned , through a 1676 colonial patent, by a five member board of trustees that regulates any activity or structures on those waterways and their wetlands on behalf of the public. According to Albert Krupski, the board's president, the SPAT program has been well-received by the town and the trustees.

"Kim Tetrault had a good idea, and we didn't want to put restrictions on it that would kill the program," Mr. Krupski said. "We gave them a few guidelines, though, because it is public property. Mainly, they could hang their gear off their private docks, but they couldn't put it in open water where it could monopolize public land."

Those in the SPAT program who plant the shellfish seeds in the creeks are called "gardeners." They pay annual dues, which include the cost of the seeds, access to a six-hour monthly educational program and the annual state scientific collector's permit that allows them to cultivate the shellfish.

Besides planting the shellfish seeds, the gardeners built and operate a hatchery, or "SPAT shack," on the shore of the creek behind the marine center. It is a 24-by-24-foot building with an 8-by-8-foot annex for tools.

There are two types of SPAT gardeners. The 130 homeowners who plant in the creeks bordering their own property are called "ambassadors" and pay dues of $250 a year, which includes the purchase of their equipment. The 120 homeowners who do not have waterfront property are called "masters" and cultivate their shellfish from an alloted area in the community "garden" at the marine center's creek. They pay $150 a year and use the center's equipment.

Every May the gardeners receive 2,000 dime-size oyster seeds -- with some receiving the harder-to-grow clam and scallop seeds -- that had been started from spawn at the hatchery. They place the seeds in shallow three-foot-long plastic cages that they hang off their docks, or from buoys, in the water. In October, when the shellfish have grown to edible size -- over one inch -- 50% are returned to the marine center, which releases them into town waters to increase the local shellfish population. The remaining shellfish belong to the SPAT gardeners, who may do whatever they want with them except sell them.

The gardeners begin with the cultivation of oysters, which are the hardiest and have a 5% mortality rate, Mr. Tetrault said. Only about 15 gardeners have received clam seeds, because they are trickier to raise and take about four years to grow to edible size, he said. Scallops were introduced to the group last year, but they too require more expertise because they need a lot of space and maintenance and have a 60% mortality rate.

Jerry Weir, who built a house on Richmond Creek in Peconic, planted 6,000 clams last year after starting with 2,000 oysters the year before. He now has 14 cages of shellfish. He also holds the SPAT record for the biggest oysters grown in a season, more than three inches in diameter, Mr. Tetrault said. Mr. Weir said he did not do anything special; "they just grew extra fast." But his wife, Linda, said she thought that "the freshwater springs that are near the dock had something to do with it."

The Weirs began building their home in 1993 when Mr. Weir retired as a stevedore on the New York City docks. Mrs. Weir, a nurse, maintains woodland gardens, while her husband spends over 600 hours a year volunteering at the hatchery, collecting data, counting the pinpoint-sized spawn and cleaning cages."We wanted waterfront property," Mr. Weir said. "I can't leave the water. I always said when I retire I wanted to do something with the water."

HENRY S. GORDON

Word has come from Henry Gordon's wife, Ruth, that he succumbed to a heart attack in February.

He and Ruth met when she worked for the Austrian Tourist Agency in New York, and several years ago they moved to her native Austria and established their permanent home in Salzburg.

Henry was a graduate of the University of Virginia, where he majored in art history. Perhaps influenced by the "periods" experienced by artists, he went through a few in his appreciation of shells -- for example, his scabrous period in which rough textured ones scratched some inner itch.

When Henry retired he was copy editor of Chemical Engineering magazine. There was a time when his assistant copy editor was Ed Cowles, and down the hall Milton Werner was copy editor of Chemical Week magazine -- a triple for the New York Shell Club.

Henry was a member of the club for about 50 years, contributed articles to this journal and was a program presenter. Outgoing and affable, he was a friend to everyone who knew him.

CONCHOLOGISTS OF AMERICA ANNUAL CONVENTION

The 2004 Conchologists of America Anual Convention will be held Saturday June 26 to Friday July 2 in Tampa Bay, Florida.

DONORS TO THE NYSC ANNUAL AUCTION APRIL 18

All of us at the NYSC would like to thank the following donors, whose generous contributions of shells and other items insured another successful auction for the Club. Dues cover a small portion of our operating expenses. The proceeds of the auction allow us to keep our dues affordable, continue the publication of Shell Notes, and put on quality programming throughout the year.

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

SEPTEMBER 12---CARL EHRLICH WILL SPEAK TO US ON HIS LATEST DIVING EXPEDITIONS AND WILL SHARE WITH US SOME OF THE BEAUTIFUL SPECIMENS HE COLLECTED ON THESE OUTINGS.

OCTOBER 2--- THE PHILADELPHIA SHELL SHOW WILL BE HELD ON OCTOBER 2 AND 3 THIS YEAR INSTEAD OF IN NOVEMBER. THE NYSC WILL BE ORGANIZING A CARPOOL ON OCTOBER 2 TO TAKE INTERESTED MEMBERS. WE LEAVE AROUND 8:30 A.M. AND RETURN BY 6:30 P.M. PLEASE CALL CHARLES WHITMAN (212-861-8211) OR CARL EHRLICH (212-675-7601) FOR DETAILS.

NOVEMBER 14- OUR SPEAKER AT THE NOVEMBER MEETING WILL BE SUSAN HEWITT ON TOPIC "NEVIS, WEST INDIES, A TRAVELOGUE WITH SLIDES, AND THE STORY OF ONE PARTICULAR WEST INDIAN MUREX SHELL". NEVIS, A PART OF ST. KITTS- NEVIS, IS A SMALL BEAUTIFUL CARIBBEAN ISLAND SOMEWHAT OFF THE BEATEN TRACK DOMINATED BY A LARGE VOLCANIC PEAK. SUSAN HAS BEEN VISITING THE ISLAND ANNUALLY AND IS CONDUCTING A SURVEY OF MARINE MOLLUSKS AND LAND SNAILS THERE.

HIGHLIGHTS OF THE MARCH MEETING

The first of two Shells-of-the-Month presentations, by Carl Ehrlich, included:a Murex anatomicus from the Maldives with an unusual tinge of orange, a giant Conus bullatus found complete with hermit crab: a Bursa roberta unusually fine in quality and condition, and three Conus eburneus, two of them albinos.

For the second presentation Romuald Czepulkowski had brought three turrids that showed how shells in private collections may represent unpublished extensions of range. For example, trawling at 60-80 meters in the Philippines recently brought up species previously known only from Australia, Japan and Hawaii. Another, Cochlespira kurcharae, was considered endemic to Japan. It has recently been found in New Caledonia, and he has since identified it in material from South Africa. Granulifusus consimilis was considered endemic to Queensland, Australia since it was discovered in 1966, but he recently found it in material from the Philippines. He believes that many other shells in private hands, if properly identified and researched, would represent similar range extensions.

The speaker was Leonard Brown, whose subject was Epitoniidae. There are a number of genera in the family, and more than 650 species. He expects that many more new species will be discovered. As specimens of some species have been found in places beyond previously known ranges they have been given names that are synonyms. Leonard has been collecting Epitoniidae since 1988 and has more than 300 species.

He said that some species live intertidally, but most live in deep, especially warm, waters. They are often to be found near anemones, which they feed on.

The door prizes were Antigone lamellaris, won by Marcia Sonnenshine; Nassarius papillosis, won by Al Scarpetti, and Epitonium pyramidale, won by Irv Hoppenwasser.

HIGHLIGHTS OF THE APRIL MEETING

The 514th meeting of the New York Shell Club was the annual auction and social, again held at Dorothy Jensen's Broadway Dance Studio in Astoria, Queens. Since Easter fell on April 11, the date of event was April 18, 2004.

Viewing of the auction material, 140 shells and related items, began at 11 a.m., and auctioneer Romuald Czepulkowski, assisted by Carl Ehrlich and Allen Aigen, opened the bidding at 1:05 p.m.

The most hotly contested shells were:

Cypraea bregariana pervelata, 27 mm, $105
Cypraea coronata debruini Lorenz 2002, 29 mm, $80
Melo broderipi, 257 mm, $64
Conus wittigi, 36 mm, $60
Conus garciai, 58 mm, $51
Conus carioca, $50
Conus nobilis victor, unusually dark, 37 mm, $50
Conus bullatus, 67 mm, $45
Cymbiola thatcheri, 58 mm, $30
Sconsia lindae, pair, 49 & 51 mm, $30
Voluta polypleura, pair, $30
Chicoreus ramosus, 230 mm, $30

The sale, bargain and literature tables attracted their share of interest, as did the refreshment table, with its cakes, fudge, bagels, cheese, punch and wine. During the halftime break the big attraction was pizza.

The door prizes were books: Caribbean Seashells, Abbott & Warmke; The Universe Below, Wm. J. Broad; Neptune's Garden- Shells A to Z, Wendy Frost.

The last item was knocked down at 3:36 p.m.

HIGHLIGHTS OF THE MAY MEETING

The day's speaker, Maxwell (Mickey) Cohen, was making his fourth appearance as program presenter.His subject was the whaling industry in America. Mickey noted that as a high school science teacher he had taught about whales for many years. He had made slide copies of many whaling prints and photos, on which he based his presentation. He also had on display whale vertebrae, baleen, scrimshawed teeth and three antique all-glass table lamps, all lit and smokelessly burning whale oil.

He said that whaling was an industry in this country before the Revolution, and that before the days of large sailing ships hunting,in all parts of the world, was done from shore. The catch provided not only food but also byproducts such as baleen which was used as stiffening strips in many ways, and the other major product - the oil that was boiled out of the blubber. It has been put to a wide range of uses, more recently ranging from automatic transmission fluid to crayons. While whaling is still a large industry it is banned in this country, even to dealing in teeth. The last American whaler sailed in 1924.

When the room lights were doused for Mickey's slide show the recording secretary found that he had left his pen-light at home, so the following notes were made by the light of a borrowed antique whale-oil lamp.

Mickey's slides of prints started with a 14th century print and proceeded with impressions of shore-based hunting and processing through the centuries and then into the Currier & Ives period of dramatic scenes in which the whales expressed their outrage.

Most of Mickey's photos were copied from Robert Cushman Murphy's book "A Dead Whale or a Stove Ship." Murphy was an ornithologist at the American Museum of Natural History, but in 1912 signed on for a whaling cruise on the Eagle. His book is illustrated with photos he took below and above deck and over the side.

Visitor Jacob Rabinowitz was welcomed. The door prizes were Conus generalis, won by Mickey, two cones and miter, won by Milton Werner, and three Cypraea: arabica, carneola, & emaciatus, won by Harvey Frajlich.

INSTEAD OF A MUSEUM, HUNGRY MOLLUSKS (New York Times, 4/4/04)

The museum is not coming. The wood-eating water creatures are feasting. That, in a seashell, is the story of two city-owned piers on the East River in Lower Manhattan.

In 2000 , the Guggenheim Museum said it would build an outpost on a site that included the old piers. But in 2002 the museum canceled the widely publicized Frank Gehry plan for financial reasons.

The piers, 13 and 14, now lie vacant. The city, also in 2002, ousted a tennis club from them, saying they had become unsafe.

The city's Economic Development Corporation said recently that the piers' future now depended on an overall plan being drawn up for the East River Waterfront.

But the planners may not be the only ones with a say in whether Piers 13 and 14 survive. The damage making them unsafe has been caused by marine borers, tiny molluks and crustaceans that eat away at wood pilings. The erosion "happens quickly once it starts," said a corporation spokesman, Janel Patterson.

The question is, more quickly than planners plan?

A SECOND LOOK AT AMERICAN POPULATIONS OF MILK SNAILS

By Henk K. Mienes
National Mollusc Collection, Berman Building,
Dept. Evolution, Systematics & Ecology
Hebrew University, 91904 Jerusalem, Israel

Species belonging to the genus *Otala* Schumacher, 1817 (Fam. Helicidae) are confined in their natural range of distribution to SW Europe and NW Africa. Two species are known from both areas: *Otala lactea* (Muller, 1774) and *Otala punctata* (Muller, 1774). These species are well defined and on conchological characters they are usually easily separated by the colour of lip: darkbrown-black in *lactea* and whitish in *punctata*. In addition a dent-like protrusion is usually present on the base of the lip in *lactea*. The other species inhabiting NW Africa are ill defined and are in need of a thorough revision.

All members of the genus *Otala* are edible and have been exploited as a cheap food source since historic times. Even today they are offered for sale in local markets.

When Europeans started to traverse the Atlantic Ocean with sailing ships, they had to bring with them enough provisions to stay alive during such a long and often insecure journey. Without doubt landsnails featured among food items which could be kept easily fresh for long periods on ships leaving Portuguese or Spanish harbours. In this way leftovers reached most probably also the Americas and were discarded here-and-there intentionally.

The first record of *Otala lactea* from an American locality goes back to d'Orbigny (1835), who mentioned it from Uruguay. Later on it has also been reported from Argentina, where it is still commercially harvested in the coastal belt and exported live among others to the United States (Zubillaga, 1999).

The local presence of colonies of so-called *Otala lactea* in the United States has been reported so far from Arizona, California, Texas, Mississippi, Georgia and Florida (see Stange, 1979 for further references). Live *Otala* (and other snails) can be bought also here-and-there in other states as food or fish-bait. In addition it has been recorded from several Caribbean Islands like Jamaica and Cuba (Stange, 1979).

Because of the specific Latin name, *lactea,* it is generally known as the Milk snail (Turgeon et al., 1988). However, surprisingly all old and new records of *Otala lactea* from Uruguay turned out to have been based on misidentifications. In fact *Otala punctata* lives in Uruguay. This is most probably also the case in Argentina.

At least part of the literature records from the United States are based on true *Otala lactea,* because in the description of the snails the dark lip is indicated. However, Stange (1979) describes the lip and aperture as liver-brown to almost black, sometimes white. From this statement it is not clear whether occasionally white-lipped individuals are found in normally coloured populations of *Otala lactea,* or that populations exist in which all the specimens show a whitish lip. In that case we are most probably not dealing with *Otala lactea* but with *Otala punctata,* as in Uruguay.

In order to clear up this problem I would be very pleased to receive any material of *Otala* from American localities, either on loan or for permanent storage in the National Mollusc collection of the Hebrew University in Jerusalem (see note below). Written descriptions of material in collections are also most welcome.

Since most probably two species of *Otala* are currently present in the United States, I propose the usage of the common name: Milksnail, for the genus *Otala.* In that case Dark-lip Milksnail should be used for *Otala lactea* and Whit-lip Milksnail should be used for *Otala punctata.*

Acknowledgement

I thank Dr. Osmar Santos (Rivera, Uruguay) for sharing his ideas concerning the *Otala* problem with me.

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Zubillaga, C., 1999 International Trade Department Snails - Escargots. General information (Poner imagenes de Helix Aspersa y Otala lactea). 1 p.(http:www.bolsamp.com.ar/snails

Note: I can send in exchange material of *Levantina* or other landsnails from Israel to those donating samples of *Otala* from American populations.

GIANT SQUID, TALL TALES AND TRUTH

By Henry Fountain, New York Times, May 5, 2004

With a length of up to 75 feet the giant squid, Architeuthis, is the largest invertebrate on earth. But it is also the most elusive. It has never been seen alive in its natural habitat.

As such, Architeuthis (pronounced ark-uh-TOOTH-us) has something of a mythical reputation. There has been speculation that the creatures live for decades, even a century, at depths of several thousand feet.

"No one really knows," said Dr. Neil H. Landman of the American Museum of Natural History. "In the ocean there are still mysteries, and this is one of them."

But research by Dr. Landman and colleagues from the State Unversity of New York at Stony Brook and other institutions may help dispel some of the myths. Architeuthis, they say may not be so long in the tooth, and reports of its depth may be greatly exaggerated.

The researchers studied one of the squid's smallest features, a bonelike particle called a statolith that is not much larger than a grain of sand. Statoliths, which are found in the squid's head and help it maintain equilibrium, grow through the buildup of calcium carbonate in discrete rings.

Dr. Landman analyzed isotopes of oxygen in statoliths from three southern giant squid , Architeuthis sanctipauli, from the Pacific Ocean. Like all specimens, these were caught in fishing nets or washed ashhore. The proportion of isotopes gives an indication of the water temperature the squid lived in, and temperature can be related to depth.

In the analysis, reported in the journal of Marine Biology, Dr. Landman found that the squid lived at depths of 600 to 1000 feet. While he noted that those figures are not definitive, they are a far cry from 2,000 to 3,000 feet, as some scientists have thought.

The statoliths were also analyzed for carbon-14, a legacy of atmospheric weapons tests. Carbon=14 in the Pacific increased from the 1950's to about 1980, then began a well-documented decline. By analyzing carbon-14 ratios, the researchers were able to calculate an age for the squid: 14 years or less.

Normal squid reach full size in a matter of months ("They're the broiler chickens of the sea," Dr. Landman said), so some scientists had thought that giant squid might grow as fast.

Dr. Landman said he thought the giants add heft relatively rapidly, though not at the pace of their cousins. After all, he said, "it's hard to imagine something growing that big so quickly."

2004 NYSC AUCTION RESULTS

The NYSC continued the tradition of successful auctions, our primary fund raising event of the year. Increased donations from members and friends of the Club, as well as continued support from book and shell dealers resulted in a good selection of items offered at auction. Attendance was down compared to prior years , but bidding was spirited. After expenses incurred for staging the auction, net proceeds added to the Club treasury was $1519.

Our challenge for next year will be to replenish the bargain table items where sales each year exceed donations, as well as sustaining contributions from existing sources.

A special note of thanks to Romuald Czepulkowski who chaired the auction this year and tirelessly put together the auction list and material for the bargain table and sale tables; to Dorothy Jensen for the use of the Broadway Dance Studio, and finally to all who labored behind the scenes to make the event a success.

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

COMING EVENTS

OCTOBER 2--- THE PHILADELPHIA SHELL SHOW WILL BE HELD ON OCTOBER 2 AND 3 THIS YEAR INSTEAD OF IN NOVEMBER. THE NYSC WILL BE ORGANIZING A CARPOOL ON OCTOBER 2 TO TAKE INTERESTED MEMBERS. WE LEAVE AROUND 8:30 A.M. AND RETURN BY 6:30 P.M. PLEASE CALL CHARLES WHITMAN (212-861-8211) OR CARL EHRLICH (212-675-7601) FOR DETAILS.

NOVEMBER 14- OUR SPEAKER AT THE NOVEMBER MEETING WILL BE SUSAN HEWITT ON TOPIC "NEVIS, WEST INDIES, A TRAVELOGUE WITH SLIDES, AND THE STORY OF ONE PARTICULAR WEST INDIAN MUREX SHELL". NEVIS, A PART OF ST. KITTS- NEVIS, IS A SMALL BEAUTIFUL CARIBBEAN ISLAND SOMEWHAT OFF THE BEATEN TRACK DOMINATED BY A LARGE VOLCANIC PEAK. SUSAN HAS BEEN VISITING THE ISLAND ANNUALLY AND IS CONDUCTING A SURVEY OF MARINE MOLLUSKS AND LAND SNAILS THERE.

DECEMBER 12-- IN LIEU OF OUR MEETING AT AMNH CARL EHRLICH HAS GRACIOUSLY AGREED TO HOST A SOCIAL FROM 3:00-6:00 P. M. AT HIS APARTMENT (#4) AT 314 WEST 22ND STREET IN MANHATTAN. PLEASE JOIN US FOR AN AFTERNOON OF LIBATION, CAMARADERIE, AND VIEWING OF SHELLS FROM CARL'S IMPRESSIVE COLLECTION.

HIGHLIGHTS OF THE JUNE MEETING

The first order of business was holding the annual meeting of the club and the election of officers and directors. The nominating committee proposed re-election of incumbent officers and directors. Approval was signified by a showing of hands. Officers and members made helpful comments on how to improve the Club. Concerning attracting new members, Carl Ehrlich said that when the Club was started, posters where placed in local schools and colleges, and said that we should make up a new poster. Larry Potter said that he would notify The New York Times when we have a special speaker. He added that we should have an internet page promoting the Club.

The speaker was Carl Ehrlich, who had on display about three dozen shells - among them cones, volutes, miters and muricids. He had collected them in the Caribbean, off the north coast of South America, and Jamaica and other islands. Many of the shells were named by Ed Petuch on the basis of shell characters, but Carl has doubts about his work. Carl had selected most of the shells on the table because they exemplified variations in color and pattern. He has noticed that in cones and miters, and perhaps other genera, shells from the shallower waters are likely to be lighter in color. Carl also showed slides from a recent trip to Australia, many of them scenic, including some of the rain forest at Cairns. One series covered a trip, with Brian Bailey, to the Coral Sea.

A second presentation was a showing of the video "America's Pearly Mussels," sponsored by the United States Fish and Wildlife Service, and the Virginia Polytechnic Institute and State University. It depicted and explained the work of agency people and students in studying the threats to the habitats of America's commercially valuable pearly mussels. Of the 14 species known worldwide, about one third live in our rivers.

The door prizes were Periglypta reticulata, won by Al Scarpetti; a fossil horn coral, won by Irv Hoppenwasser, and Liguus fasciatus castaneo zonatus, won by Harvey Frajlich.

HIGHLIGHTS OF THE SEPTEMBER MEETING

Carl Ehrlich reported that recent hurricane damage had necessitated closing the island of Sanibel. There had not been much damage to the shell museum, but that donations are needed. The executive committee will decide on the Club's response.

Carl and Romuald Czepulkowski offered comments on, and recalled their memories of, the annual meeting of the Conchologists of America in Tampa.

The speaker was Carl, who returned from a collecting trip to the Marquesas Islands only two and a half weeks before. He reported difficult diving but great shelling. The haul included 25 species of cones, a half-dozen rare miters and 12 species of Cypraea, one specimen an isabella that is remarkably small but mature. Five of the cones are endemic to the Marquesas. He mentioned finding Conus gauguini Demotta 1982 measuring 93 mm that may be a record size. Carl said he would do a follow-up to this program which , with more preparation time, would be more comprehensive and illustrated.

He also had on display a selection from genera Cassis, Charonia, Cymbium and Murex, and Cymbiola (pulchra) excelsior Limpus & Bouchet 2000 from a segment of the Great Barrier Reef called The Swains, off Queensland. It's rare, and he said it is being overcollected and will disappear. In this exhibit was Cyrtulus serotina, which he said was the only species of the genus. Thus triggered, Romuald said it may not be, but he was not prepared to support a refutation.

Romuald was prepared to discuss the Philippine Amphidromus, a terrestrial genus in which variation in color and pattern make it difficult to separate species. The literature on the subject. he said, is riddled with errors. Experimenters have answered some of the questions by forcing interbreeding and then determining whether the offspring are fertile or infertile.

The door prizes were two Conus marchionatus, won by Al Scarpetti and Ed Cowles; Littorina angulifera, won by Cedra Varga; Cypraea annulis, won by Larry Potter, and Cypraea exosa, won by Milton Werner.

PRESIDENT'S LETTER

Last year continued to present the Club with challenges. We have stabililized membership which is now 46 and as a result of a successful auction our finances continue to be sound. We now have approximately $9500 to support the Club. The club administration has been simplified and Notes, although not as robust as we would like , continues to published. We have been able to book interesting speakers, including National Geographic staff photographer David Doubilet, who as luck would have it spoke to us on the sunday in December when a freak massive snowstorm struck New York.

The Club continues to be nurtured by a dedicated small core of members, but to insure its long-term success we will need to not only increase our membership , but also find additional individuals who can help share the administrative burdens of running the Club.

The challenges for 2004-2005 will be energizing our membership base, increasing our membership, having members contribute articles for Notes to allow us to publish more original material. We will shortly be sending out a revised Membership directory . I hope this along with our increased e-mail communications will provide more interchange between members. I also hope you will help us by attending as many club functions as you can. Once time permits I will establish a web-site for the Club which should provide more exposure and aid in attracting new members. We also plan to put together brochures and posters that can be used for promotion of the Club. We encourage you to send in articles on your shelling adventures, species range extensions, and on your area of interest, to help us put out a successful Notes.

At a time when shell clubs with ageing memberships face a fierce competition from so many alternative sources of entertainment your support is vital. I hope I will have the opportunity to see more of you during the year , and for those of you where distance makes it impossible to join us, I hope the internet will give us a chance to keep in touch.

Regards, Charlie

MEET MARLA L. COPPOLINO

American Museum of Natural History Malacology Collections Manager

Marla was asked to introduce herself to her fellow members of the NYSC, and she responded as follows:

I am thrilled to be working in my new position as Scientific Assistant and, essentially, as Collections Manager, of the Malacology Section of the American Museum of Natural History. My work involves all aspects of collections management, including handling accessions and loans, re-curation tasks, re-organization of the collection, cataloguing, website design and building, and planning for a new database system. In addition, I assist the Curator of Mollusks, Dr. Paula Mikkelsen, with tasks related to her research.

My long-term goals in my work in the Malacology Section include production of a Pulmonate type catalogue, computerization of all 310,000+ lots (or at least progressive action in this direction!), and new website additions, such as an on-line database catalog.

My personal area of interest is terrestrial snails, particularly those of Sicily, where I have spent some time. There, one can hardly walk more than a meter in any direction without running into land snails! For me this taxonomic group represents a life-long interest; I am fascinated by how these animals have been able to evolve and adapt so well to a terrestrial environment. At present, I do not have the time for any of my own active research, but I am planning a short trip back to Sicily, which is also the origin of my own roots, sometime in 2005. Eventually, I would like to compile a species list of terrestrial mollusks of Sicily, an under-studied group, on an under-studied island.

I plan to attend the NY Shell Club meetings as my busy schedule allows. I can be contacted at AMNH at 212-769-5720 or by email: marlacop@amnh.org

A brief outline of my experience and activities follows:

---1991--BSA in Biological Sciences, University of Georgia, Concentration in Zoology, coursework included herpetology, marine biology, biodiversity, and pre-veterinary studies

---1992 to present--- freelance illustrator and artist; work ranges from biological illustration to fine oil paintings. Actively produce and exhibit work. See website: www.marlacoppolino.com

---1992- Biological Technician II, Fish & Wildlife Associates, Chattanooga, TN; TVA Aquatic Biology Lab's Zebra Mussel Monitoring Project. Checked for presence of zebra mussel (Dreissena polymorpha) veligers in Tennessee rivers and lakes. Also worked on monitoring project for Asiatic clams.

--- Other related (and not so related activities)
    1990-1993---volunteer at nature centers
    1991---internship in Herpetology Department of Zoo Atlanta
    1999-2003--lived in Italy---produced paintings, drawings, etchings, illustrations, including for scientific publications at La Specola Zoological Museum, Florence; taught art courses; returned to my roots.
    May 2004-- my arrival at AMNH

ENVIRONMENTALISTS PLAN TO REPLENISH CLAM POPULATION IN A LONG ISLAND BAY

By Patrick Healy, New York Times, October 6, 2004

Joe Woronowicz is 65 years old and has been a bayman so long that he can remember when the scallops and clams were plentiful in Great South Bay of Long Island. He is retired now, but recently agreed to go clamming with a friend. The change in the shallow, sandy waters was startling, he said.

"It's like a big puddle," he said. "It's dead."

But now, a partnership of environmental groups, town and county governments and fishermen are trying to bring the bay back to life. Researchers on the project say they will begin by replenishing the bay's devastated clam populations and its fields of eelgrass, which provide underwater habitats for creatures like scallops.

The Nature Conservancy, which owns 13,000 acres of land in the bay, is leading the move. Their plans include dropping 630,000 clams into the bay next spring, creating areas where clams can breed, shifting the bay's food chain and improving water quality.

Officials with the Nature Conservancy said they and the other agencies participating in the project would announce details of their plans at a news conference tomorrow.

It is not the first time that there have been plans and promises to revive the shellfish population. As far back as 1987, Suffolk County devised sweeping plans to restore the bay to the days when it was thick with oysters, scallops, mussels and clams.

"The unfortunate part was that very few of these recommendations were actually acted on," said Marci Bortman, the Nature Conservancy's marine conservation director. "Fifteen years later, the bay is in worse shape than it ever was."

The difference now, said reseachers with the project, is that the number of clams and other shellfish has plunged so low that people along the bay are now committed to doing everything possible to boost the populations.

The Great South Bay once boasted some of the country's most fertile clam beds, but the population has plunged an estimated 90 percent in less than a decade. Commercial fishers took home 8,000 bushels of clams lasst year compared with 755,000 in 1997, said William Wise, chairman of the Bluepoints Bottomlands Council, which is advising the Nature Conservancy on its plans.

The new push to restore shellfish in the bay began two years ago, when the Bluepoints Oyster Company, which owned about 20 percent of Great South Bay, donated its 11,500 acres to the Nature Conservancy, Mr. Wise said.

The Sufflok County towns of Islip, Brookhaven and Babylon control the rest of the 45-mile-long bay.

"People want to see this dealt with on one scale, and that's a bay-wide scale," Mr. Wise said. "They're all in this one boat together, and the boat's not doing very well."

The clams that will be added to the bay will be set in "spawner sanctuaries," researchers said. There, they will live in dense clusters where reproduction is easier and where they will be safe from commercial fishermen or clam-diggers.

Mr. Bortman said the clams naturally filter algae and nitrates from the bay, so the more clams, the cleaner the bay. If the population were at healthy levels, the clams could filter the entire bay in three days, but right now, it takes the existing population 36 days to perform the task, she said.

Much of the groups work will center on studying shellfish populations to see where they thrive, where they die out, where they reproduce fastest, officials said.

Officials with the conservancy said they might also try to limit the number of clams commercial fisherman can take from the bay.

Carl LoBue, a marine specialist for the Nature Conservancy, said the group also planned to reduce the number of crabs, a natural predator of clams, by increasing the population of fish that eat the crabs.

"This is moving us forward toward an ecosystem-management approach," Mr. LoBue said. ":We might be able to be one of the first agencies to do this."

Given the weather related events of this fall -- perhaps it is appropriate to reprint this alert from the May 1993 issue of Natural History.

"...the hurricane is packing winds of 105 miles an hour, and landfall is expected about 7:30 tonight."

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FOUNDED JAN. 1949

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DIRECTORS: ROMUALD CZEPULKOWSKI, AL SCARPETTI, LARRY POTTER

MEMBERSHIP- CHARLES H. WHTMAN

EDITOR: MILTON WERNER, 70 RICHMOND ST., BROOKLYN, N.Y. 11208

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Individual Membership---------------	$12.00 per year
Family Membership ------------------	$15.00 per year
Corresponding Membership---------	$10.00 per year
Foreign Membership-----------------	$12.00 per year(U.S. $)

The Membership officer should be notified promptly of any change of address.

NEW YORK SHELL CLUB NOTES NO. 373 DECEMBER 2004

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COMING EVENTS

JANUARY 9--- CHARLIE WHITMAN WILL SPEAK ON SHELLING IN CULEBRA, AN ISLAND JUST EAST OF PUERTO RICO. SLIDES AND SELF-COLLECTED SHELLS WILL ACCOMPANY THE PRESENTATION.

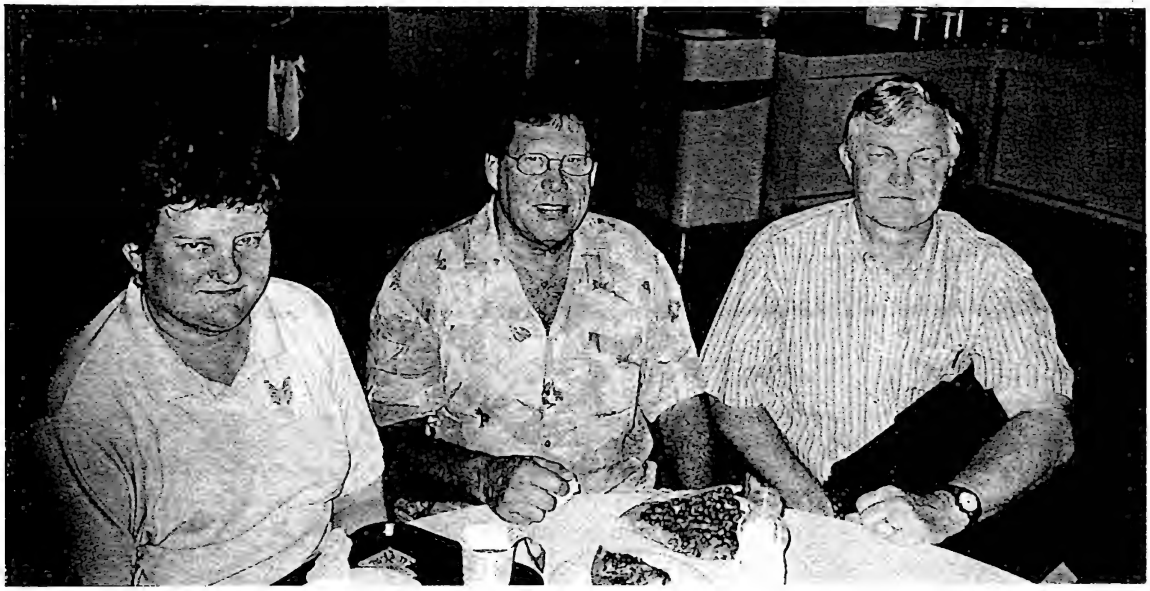
FEBRUARY 13-- OUR SPEAKER WILL BE ILYA TEMKIN WHO IS A GRADUATE STUDENT OF BRIDGES , A JOINT EVOLUTIONARY BIOLOGY PROGRAM BETWEEN THE AMERICAN MUSEUM OF NATURAL HISTORY AND NEW YORK UNIVERSITY. HIS TOPIC WILL BE EVOLUTIONARY HISTORY OF THE BIVALVE GROUP PTERIOIDAE (THAT INCLUDES PEARL AND WING OYSTERS) FROM ITS ORIGIN IN THE MIDDLE ORDOVICIAN TO THE PRESENT AND WILL BE ACCOMPANIED BY DVD GRAPHICS. IT WILL ALSO INCLUDE A TALK ABOUT THE HISTORY OF SCIENCE SINCE PRE-LINNEAN TIMES RELATED TO THE STUDY OF PEARL OYSTERS AND THEIR ALLIES.

MARCH 13-- CARL EHRLICH WILL SPEAK ON SHELLING IN MADAGASCAR . SLIDES AND SHELLS WILL ACCOMPANY THE PRESENTATION.

APRIL 10--- THE NYSC ANNUAL AUCTION AND SOCIAL WILL BE HELD AT DOROTHY JENSEN'S BROADWAY DANCE STUDIO AT 31-08 BROADWAY, ASTORIA, QUEENS.

HIGHLIGHTS OF THE OCTOBER MEETING

The October meeting consisted of our annual trip to the Philadelphia Shell Show. Two groups carpooled to the event arriving at separate times. Those seriously interested in cornering the market in rare or unusual shells left in the early shift, while those taking a more leisurely approach to the event arrived later. Both groups were able to achieve their goals. The shells, books, and shell-related items spread out on the dealers' tables presented one with a broad variety of choices. The exhibits on the mezzanine level whether for best shell, genus, or family presented a feast for the eyes.
At noon all of us gathered in the cafeteria for camaraderie and to compare notes. By late afternoon all were ready to return home after a very pleasant outing.



From left to right--- Sedra Varga, Carl Ehrlich, Rich Kelly

From left to right-----Al Scarpetti, Romuald Czepulkowski, Rich Robbins

HIGHLIGHTS OF THE NOVEMBER MEETING

Carl Ehrlich had on display a number of giant-size conus, most of them exceeding published record sizes. The specimens, which he had collected, included luteus , collected from near where Lt. John F. Kennedy's PT-109 had sunk. It measures 66 mm, 14 mm larger than the record. Others were admiralis, aulicus, boetica and tisei.

The speaker was member Susan Hewitt, who distributed copies of her article "The Curious History of Dermomurex alabastrum (A. Adams, 1864) (Muricidae: Gastropoda) and a New Geographical locality for the Species: Nevis, West Indies". It appeared in Vol. XXXV(1), 2003 of The Festivus.

In her presentation she outlined the "curious history," adding background notes on the events and characters involved, and on her work assembling the facts to create a comprehensive view. Susan followed her remarks with a slide show provided by Charlie Whitman, who also spends some time collecting in the West Indies. The slides with comment by both, covered Charlestown, Nevis's picturesque "downtown," and its surrounding terrain and waterways.

The door prizes were Conus miles, won by Laureva Blackstone; Conus quercinus, won by Richard Blackstone, and Conus emaciatus, won by Milton Werner. Charlie had on display Caribbean shells that he had collected, and which were there for the taking.

HIGHLIGHTS OF THE DECEMBER MEETING

The december meeting was a social at Carl Ehrlich's apartment where members were able to enjoy the bounty of food and drink in the company of fellow mollusk enthusiasts. Carl's extensive collection of rare shells, many self-collected, were on display while a video of several species of conus chasing hapless less aggressive mollusks around a large fish tank played on the television. A good time was had by all.

PEET BIVALVES ANNOUNCES NEW DATABASE

Western Atlantic Bivalves (ver. 1) is a new on-line checklist and database, offered as research and educational resource on the recent marine bivalves of the western Atlantic. It is intended as a research tool, primarily serving systematics, but with immediate applications to ecology, environmental science, and parataxonomy. To this extent, it also serves as a catalog and identification tool. Beginning from a phylogenetic family list, the user can access an alphabetical species list for each family, complete with recognized synonyms and other non-current names. Any valid name that is blue-lined is more fully presented as a series of species level webpages providing an image of the fully adult shell, taxonomic information (original citation, scan of the original description [if allowed by copywright law], type locality, deposition of type material),recognized synomyms, a distributional map, key characters, images of a growth series, synonyms, common names, and reference to other internet links and published works of significance. Blue-lined synonyms lead to pages restricted to taxonomic information only.

Western Atlantic Bivalves is an elaboration of the western Atlantic bivalve portion of the 1998 American Fisheries Society checklist, "Common and Scientific Names of Aquatic Invertebrates from the United States and Canada: Mollusks" by D. Turgeon, et al. It removes two limitations of that list, namely the 200-ft. depth limit, to include deep-water species, and all geographical boundaries, to include all species that could be construed as western Atlantic, from Greenland to Cape Horn. It also includes synonyms, misspellings, and names applied in error. This list and its inked pages are a work in progress, and updates and newly added pages are expected to be frequent. Any comments, additions or suggestions are most welcome and should be directed to Paula M. Mikkelsen<mikkel@amnh.org>.

This list is a product of NSF award DEB/PEET-9978119 to Rudiger Bieler (Field Museum of Natural History, Chicago) and Paula M. Mikkelsen (American Museum of Natural History, New York). The webmaster is Marla Coppolino (AMNH). "Western Atlantic Bivalves" can be accessed directly at http://peet.amnh.org/Western_Atlantic_Bivalves/ or through the PEET Bivalves web site at http://peet.fmnh.org/Products_Local_Resources.html.

REBUILDING A RIVER UPSTATE, FOR THE LOVE OF A TINY MUSSEL

By Anthony DePalma, New York Times, April 26, 2004

CUDDEBACKVILLE, N.Y.---Back in the skinny woods where he spends a lot of time, George E. Schuler sometimes stares at the cool, fast river trying to figure out what a dwarf wedgemussel might think was paradise-- that is, if it had a brain, which it doesn't.

But the tiny freshwater mussel, no bigger than a quarter and one of the most endangered species in upstate New York, does have a heart. And after studying the tiny mollusk's every twitch and shudder for nearly a decade, Mr. Schuler, a biologist who grew up on a farm on Ohio, thinks he knows what's in it.

The mussels are notoriously picky about their living arrangements, demanding silt-free fresh water that is neither too cold or too fast.

"They like to be in little refugia," Mr. Schuler said, describing in intimate sounding terms the cozy coves and sheltered niches where the mussels love to hide.

The problem is that while the wedgemussels survive happily in a part of the Neversink River that Mr. Schuler looks after for the Nature Conservancy, a national environmental organization, not one of them is ever found upstream of an old dam that spans the river.

That got him to thinking. A few years ago he proposed something radical-- restoring the river to its natural state by removing the dam. This would give one of the most significant populations of dwarf wedgemussels in the world a little bit of elbow room - that is if they have elbows which they don't.

While other states have torn down old dams for environmental reasons, New York, which has thousands, never has. But based on Mr. Schuler's observations, and a promise of logistical support from the Army Corps of Engineers, local officials here approved his plan, especially when told they would not have to pay a penny of the $1.8 million cost.

But breaking up the old dam, 107 feet long and 8 feet high, is only part of the project. Before it can come down, later this year, Mr. Schuler had to come up with detailed blueprints for restoring the riverbed.

In essence, he has become a river architect, and his principal client, whose likes he has tried to divine and whose every whim he has tried to address, are the wedgemussels.

Recreating their favorite hangouts will be tricky, since the dam has impeded the Neversink's free flow for almost a century. The river's natural contour has been drastically modified and its ecosystem radically altered.

Mr. Schuler knows that while the wedgemussel is his principal client, he has to be responsive to the needs of human residents in this area, which reached its economic peak 150 years ago. The people insisted that artifacts of their proud past along the river be preserved.

With so many competing interests, how is it possible to do what nature never did: that is design a river that meets all expectations.

“It’s part science and part art,” said Mr. Schuler, a graduate of Yale School of Forestry and Environmental Studies. He said his goal was not the re-establishment of the pristine conditions of the 18th century before the area was colonized, but a restoration that will protect the mussels and respect the people living nearby.

For the nature conservancy, removing the Cuddebackville dam marks an important turning point. Known primarily for buying land that is environmentally sensitive or threatened by development, the organization has recently broadened its scope to focus on entire ecosystems that endangered species need to survive.

“ The Neversink project is a microcosm of how the Nature Conservancy has evolved,” said Henry Tepper, the organization’s director in New York State. “We have to have more flexibility than just buying land and putting a fence around it.”

The dwarf wedgemussel was discovered in the Neversink in 1990, the same year it was placed on the federal endangered species list. In 1993, the Nature Conservancy, in accord with its traditional mission, acquired 170 upland acres of land and created the Neversink Preserve to protect the mussel. The preserve, through additional land purchases by the conservancy, now covers 630 acres.

But Mr. Schuler realized that just acquiring land was not enough to protect the wedgemussel, because its life cycle was quite complicated.

The wedgemussel rely on fish in the river to grow. They wiggle a fleshy flap of skin to attract sculpins, small fish without scales. When nosey or hungry sculpins inch close enough to the wedgemussels, they get sprayed with larvae, which cling to the fish. The developing mussels detach and form new colonies.

The Cuddebackville dam, built in the early 1900’s to provide water for a local hydroelectric plant, blocked the sculpins. That is why the wedgemussels offsping that hitched a ride on the fish could never spread beyond the dam.

The linkage of mussels, fish and the dam made it clear that the dam, abandoned since 1945 and dangerously deteriorated, had to go.

But taking apart the dam and removing the debris is just the first step. The Neversink itself, whose odd name is believed to be the phonetic pronunciation of American Indian words that mean “water between highlands,” must be rebuilt.

For one, the riverbed above the dam will be several feet higher than the area immediately below the dam. Decades of pounding have scoured that area, creating a deep pool. The two levels have to be resculpted so that water moves at a steady velocity, without creating silt that can bury the mussels.

Once the riverbed is renovated, the river bottom will have to be redecorated. Mr. Schuler and the project's consulting engineer did extensive surveys of the existing riverbed, especially the areas favored by the wedgemussels, so that they could accurately recreate those conditions and encourage the growth of the mussel population.

That meant charting the size and placement of the boulders and counting the pebbles in various sections of river bottom. Too many rocks would crowd the mussels out of the gentle coves they prefer, and too few would leave them dangerously exposed to the fluctuating currents.

" A rule of thumb is if you want to encourage a species, you try to mimic the conditions that are already there," said James B. MacBroom, the engineer whose firm, Milone and MacBroom, has been working on the Neversink restoration.

Mr. Schuler has gone out of his way to please his client, traveling to an upstate sand and gravel mine to select boulders with the right color and texture for the Neversink. Once the boulders are roughly in place, art takes over from science, and the crowbars come out. Final adjustments are made not according to a detailed plan, he said, but a feel for the river and its critters.

"We spent enough time in the river to know what we're looking for," he said.

That sometimes puts him in conflict with the engineers. For example, the Corps of Engineers is worried that once the concrete embankment is removed, the river's edge near the dam will have to be shored up with boulders. Mr. Schuler disagrees.

"That's not restoration," he said, "that's engineering.

There is also another dam on the same stretch of the Neversink. Older and longer than the one being removed, this dam sits on the other side of a small island and diverts river water to the old Delaware and Hudson Canal, which runs through the area. Local residents wanted to keep water flowing into the canal and refused to allow that dam to be destroyed.

Instead, the dam will be lowered several feet and a rock ramp built to help the shad, sculpins, and other fish get over the impediment.

The D & H Canal, which reached its heyday in the late 1800's, is another reminder that while the long decline of economic activity in upstate New York has brought hardship, it has also revitalized the environment.

The Neversink Reservoir, about 40 miles upstream from the dams, is generally considered to have the cleanest water in New York's vast water supply system. The river is so clean it is sometimes referred to as gin clear, perhaps a nod to the habits of the fly fishermen who consider it a benchmark trout stream.

Removing the dam will wipe away some of the remaining evidence of the area's former economic vitality, but Mr. Schuler's insistence on mixing science and art, while using equal part brain and heart, may achieve a kind of equilibrium this old settlement has not seen before.

"Juggling both natural history and cultural history is important in an area like this," he said, walking along the towpath of the old canal. " Having a secure ecological treasure side by side with a part of our cultural history like this is important to our ability to know who we are."

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NEW YORK SHELL CLUB NOTES NO. 374 MARCH 2005

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On our meeting days, you may enter the museum without paying the museum's admission fee by presenting your New York Shell Club card at the entrance directly below the main staircase on Central Park West.

CLUB EVENTS

APRIL 10--- THE NYSC ANNUAL AUCTION AND SOCIAL HELD AT DOROTHY JENSEN'S BROADWAY DANCE STUDIO AT 31-08 BROADWAY, ASTORIA, QUEENS.

MAY 9-----VIDEO----"MOLLUSKS IN MOTION" , SHOWING THE BIOLOGY OF LIVING MOLLUSKS. PRESENTATION BY ROMUALD CZEPULKOWSKI ON LAND MOLLUSKS.

JUNE 19-- GEORGE SCHULER , DIRECTOR OF NEW YORK'S DELAWARE RIVER BASIN PROGRAM OF THE NATURE CONSERVANCY WILL SPEAK TO US ON A PROJECT TO PROTECT AND EXPAND THE HABITAT OF THE ENDANGERED WEDGEMUSSEL. IT INVOLVED THE FIRST EFFORT IN NEW YORK STATE TO RESTORE THE FLOW OF A STREAM/ RIVER FOR ENVIRONMENTAL REASONS THROUGH THE REMOVAL OF A DAM.

HIGHLIGHTS OF THE JANUARY MEETING

Carl Ehrlich had on display a recently acquired Conus lamberti Sowerby 1877. It had been collected at a depth of 175 ft., in the Coral Sea. It is one of very few known specimens. He also showed a Cymbiola thatcheri McCoy 1868, measuiring 130 mm. It, too, was collected in the Coral Sea.

Romuald Czepulkowski displayed a number of turrids, explaining how they illustrated the difficulties encountered in trying to establish the taxonomy of the family.

Marla Coppolino, reporting for the Museum, said that the Dept. of Malacology needs volunteers. She also described the department's new website, http://peet-amnh.org/Western_Atlantic_Bivalves. It is based on research by Dr. Paula Mikkelsen, Curator of Malacology, and is a phylogenetic list. Species pages included growth series and original descriptions. New pages will be added weekly.

Marla also said that the department welcomes visitors and inquiries. She is the contact person, at 212-769-5720, and at marlacopp@amnh.org.

The speaker was Charlie Whiman, who drew on his close familiarity with the island of Culebra, just east of Puerto Rico, to describe its shelling spots, its terrain, its towns and building styles, and its people-- relaxed, easy-going and friendly. Charlie accompanied his comments with slide photos, some aerial, that showed the island's variety of natural and man-made attractions.

HIGHLIGHTS OF THE FEBRUARY MEETING

Carl Ehrlich had on display volutes, some very rare. Romuald Czepulkowski again reminded members that a careful look through their collections might reveal data indicating a range extension. As a case in point, he noted that the taxanomy of endemic species of west Africa is not comprehensive.

The speaker was Ilya Temkin, a graduate student working in BRIDGES, a joint evolutionary biology project of the American Museum of Natural History and New York University. His subject was the evolutionary history of the superfamily Pterioidae, which includes Isognomonidae, Pulvinitidae and Malleidae. The superfamily totals 120 species. The fossil record places the origin of the Pterioidae in the Middle Ordovician period, and shows considerable diversity in extinct families and forms. The recent distribution of Pterioidae is from east Africa to the central Pacific.

Ilya's narration was accompanied by shell photographs and elegantly crafted graphs, lists, charts of relatedness and adaptive evolution, and diagrams of shell structure. His comprehensive gallery of images emanated from a DVD projector.

Present work in the project includes study of shells, anatomy and DNA for further insights into the evolution and relatedness of the group. The project also has at least one practical and immediate goal. It hopes to find a way to help the pearliculture industry to ward off an ecological crisis-- invasion of oyster farms by damaging and destructive species.

On display were shells representing genera in the families--a smorgasbord of highly distinctive forms that invited many questions and much discussion.

The door prizes were Cypraea caputserpentis, won by Sedra Varga; Conus leopardus, won by Al Scarpetti, and Codakia tigerina, won by Milton Werner.

HIGHLIGHTS OF THE MARCH MEETING

President Charlie Whitman reported good communication with the museum through Marla Coppolino, and said that she had passed along to the Club a number of desirable shells for the April auction, selected from among specimens de-accesioned by the museum. He also said that he and other members are trying to find a favorable place and time for a field trip. One possibility is a dredging trip at the Mystic (Conn.) Aquarium.

The speaker was Carl Ehrlich, who with slides and memory described a shelling trip to Madagascar about ten years ago. He and Denise were joined by Brian Bailey. The island is mountainous in the central area, with rain forest to the north and desert to the south. He pronounced the government corrupt and the food good.

Many of his slides showed the inquisitive, friendly lemurs -- brown, ring-tailed and dancing. They climb on visitors' shoulders, accept food, especially bananas, and often drop-in at restaurants where there is a wider selection. Even Brian, who normally constrains his enthusiasm for animals, become a devotee.

Much of the collecting was done by snorkeling, because they found only one place where compressed air was available, in the area of Anacao. However, the slides showed a good haul. In one there were about two dozen textilis, no two alike in color and pattern. On other slides were more cones and many other families.

The door prizes were Distorsio reticulata, won by Gloria Lipton, Lunatia heros, won by Charlie Whitman, and Oliva miniacea, won by Al Scarpetti.

A NEW INTERNET PUBLICATION ON THE HISTORY OF MALACOLOGY IS AVAILABLE ON THE WEBSITE OF THE AMERICAN MALACOLOGICAL SOCIETY

Noted authorities on mollusca and its history Eugene V. Coan, Alan R. Kabat and Richard E. Petit have posted their new publication, "2400 Years of Malacology"on the website of American Malacological Society. It is a comprehensive catalog of biographical and bibliographical papers on malacologists, conchologists, paleontologists and others with an interest in mollusks. At present the catalog is over 600 pages and indexes over 5,000 individuals. The authors consider it a work-in-progress to which they will periodically post updates. It is a welcome addition to the literature on the history of malacology, and its online availability ensures ease of access to all of us whether amateur or professional.

Online access is at http://erato.acnatsci.org/ams/publications/epubs.html

We know that collecting and dealing in shells can be a risky business, but this recent article in the Philadelphia Inquirer certainly adds a new twist.

WWI GRENADES FOUND IN CLAMS

Talk about shell shock. The Army is investigating incidents of unexploded World War I munitions showing up in clamshells used to pave driveways and parking lots.

The ordnance, including hand grenades and at least one chemical weapon, was dredged up over the past 18 months by mechanical clam harvesters off the coast of Atlantic City, said Robert Williams of the Army Corp. of Engineers.

More than 300 munitions have been found in 18 driveways and a Delaware clam-processing plant, Williams said. Some grenades were actually found inside the clams.

Last February, a Bridgeville, Del., resident discovered 32 live grenades while spreading crushed shells delivered to his property. No homeowners have been injured, but three servicemen were hospitalized last July while detonating a projectile that contained mustard gas.

HAWAII LOST 11 SPECIES OF TREE SNAILS IN THE LAST 20 YEARS

excerpted from The New York Times, April 25, 2004

Nearly half of the 114 species that have become extinct in the first 20 years of the federal Endangered Species Act were in Hawaii, according to a new report by an advocacy group.

“The number is shocking and indicates a grave failure in federal management of the nation’s most powerful environmental law,”said the report, by the Center for Biological Diversity. Kieran Suckling, the center’s executive director, said that with so many unique species, Hawaii faced the worst problem in the country.

The 52 species lost from the islands include the large Kauai thrush, which was once the most common bird on the island; the Molokai thrush, which was endemic to Molokai; and 11 species of tree snails.

Only 19 percent of the extinctions involved species on the endangered list, showing that the1973 law is working-- at least for species that make the list, said Mr. Suckling, an author of the report.

“But species known to be endangered were stuck in bureaucratic delay and went extinct before they had a chance to be listed,” Mr. Suckling said. “That should never have happened.”

Nearly all the species could have been saved if the Endangered Species Act had been properly managed, and fully financed, and “shielded from political pressure,” he said, adding, “Instead they were sacrificed to bureaucratic inertia, political meddling, and lack of leadership.”

The report lays much of the blame on the Federal Fish and Wildlife Service. “Listing delays and extinctions have plagued the Federal Fish and Wildlife Service for 30 years,” said Brian Nowicki, another author of the report, “but the Bush administration has pushed the crisis to an unprecedented level.”

The Bush administration has placed an average of only nine species on the list per year, while the

Clinton adminstration averaged 65 listings per year.

The wildlife service denied "the inflamnatory claim" and challenged the accuracy of the report. It said that recovery of species is a very long process and that some of the species were beyond recovery when the act was passed in 1973. The agency also said that the fish and wildlife habitat had been declining for decades because of urbanization.

Fifteen of Hawaii's extinct species were terrestrial snails, 13 each were flowering plants and insects, 8 were birds and 3 were moths.

HOW SMART IS THE OCTOPUS, AND HOW DO WE KNOW

from The New York Times, Dec.14, 2004

The intelligence of an invertebrate is hard to measure in human terms, but there is a wide consensus among scientists that the octopus, with its large and complex nervous system, is the smartest of the invertebrates.

They base this conclusion on things like studies of its varied approaches to tasks in its environment, like breaking open and feeding upon shellfish; on observational studies that have found it to participate in activities that very much resemble play; and on a widely publicized study that seemed to find that the octopus could learn by watching others.

In a series of experiments at the Seattle Aquarium, the Pacific octopus, Enteroctopus dofleini, was tested on the strategies chosen to open a variety of shellfish and some empty shells, glued shut, which the subjects quickly learned to ignore. In other studies, some members of the same species were found to "play," using their water jets to propel a floating bottle around a tank.

In a 1992 study in Italy, Dr. Graziano Fiorito and Dr. Pietro Scotto found that when specimens of the common octopus, Octopus vulgaris, were rewarded with food for grabbing red balls rather than white balls, and punished with a mild shock when they chose the white balls, "untrained" octopuses that were allowed to observe them would imitate their choices.

This study has met with skepticism from some critics, who say that the experiment was poorly designed in several aspects and that the observing octopuses may have simply latched on to the more familiar color of the ball, without considering the consequences of the choice.

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NEW YORK SHELL CLUB NOTES NO. 375 JUNE 2005

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CLUB EVENTS

SEPTEMBER 11--- OUR SPEAKER IS GARY ROSENBERG, ASSOCIATE CURATOR, AND CHAIR OF THE MALACOLOGY DEPARTMENT AT THE ACADEMY OF NATURAL SCIENCES IN PHILADELPHIA WHO WILL PROVIDE US WITH " AN INTRODUCTION TO THE OVULIDES....ALLIED COWRIES AND LIVING ANIMALS." THE MEETING WILL BE HELD IN THE LINDER THEATER AT 2:00 P.M>

OCTOBER 8----- THE PHILADELPHIA SHELL SHOW WILL BE HELD ON OCTOBER 8 AND 9 AT THE ACADEMY OF SCIENCES IN PHILADELPHIA. THE NYSC WILL BE ORGANIZING A CARPOOL ON OCTOBER 8 TO TAKE INTERESTED MEMBERS. WE LEAVE AROUND 8:00 A.M. AND RETURN BY 6:30 P.M. THIS YEAR ONE CAR MAY STAY TO ACCOMODATE THOSE WHO WISH TO ATTEND THE THE 6:00 P.M BANQUET AT THE ACADEMY. FULL DETAILS WERE E-MAILED OR MAILED UNDER SEPARATE COVER. MORE INFORMATION ON THE SHOW IS ON THE LAST PAGE OF NOTES. PLEASE CALL CARL EHRLICH (212-675-7601) OR CHARLES WHITMAN (212-861-8211) FOR CARPOOL AVAILABILITY.

HIGHLIGHTS OF THE APRIL MEETING

The 523rd meeting of the New York Shell Club was the annual auction and social, again held at Dorothy Jensen's Broadway Dance Studio in Astoria, Queens, on April 10, 2005.

Viewing of the auction material, 150 shells and related items, began at 11:00 a.m., and auctioneer Romuald Czepulksowski, assisted by Allen Aigen and Larry Potter, put up the first item at 1:05 p.m.

The shells that inspired the most spirited competition were:

Conus pergrandis, 94.5 mm, $260
Conus thomae w/o, 64 mm, $80
Conus wittigi, 38 mm, $74
Mitra helenae, 98 mm, $66
Conus dusaveli, 70 mm, $50
Conus marchionatus, pair, 41 and 35 mm, $50
Conus nobilis victor, pair, 49 and 31 mm, $50
Neocancilla papilo, 62.8 mm (2.6mm larger than listed record), $44
Voluta polypleura, 100 mm, $44
Ancilla dimidiata, 25 mm, $40
Conus aurisiacus, 50 mm, $40

The door prizes were Chicoreus bourguignati, Charonia variegata and Charania lampas.

The raffle prize was Morum watanabei.

The sale, bargain and book tables did brisk business, and the refreshment table drew its share of attention. Everyone left room for pizza that appeared at the halftime break.

HIGHLIGHTS OF THE MAY MEETING

The 524th meeting of the New York Shell Club was led by Director Romuald Czepulkowski, As President Charlie Whitman and vice-president Carl Ehrlich were absent by reason of being away.

Romuald had on display 24 lots of Cuban land shells, illustrating diversity in color and pattern, and representing six species, including the well-known picta. He referred to them as examples in his remarks on the changing standards that have influenced the determination of species and subspecies.

The speaker for the day was the narration that was part of a video titled "Molluscs in Action," produced by the Bailey-Matthews Shell Museum. It is a technically excellent view into the life habits and strategies of molluscs, with emphasis on gastropods and molluscs. Conceived as an introduction to conchology, it doesn't delve deeply, but should be of interest to any collector whose interest goes beyond the shell in the display case.

The door prizes were Nassarius papillosus, won by Romuald Czepulkowki; Conus tinianus, won by Florence Fearrington, and Liguus fasciatus, won by Sedra Varga.

HIGHLIGHTS OF THE JUNE MEETING

Carl Ehrlich had on display cones, miters, murex, Latiaxis and Cymatiums that he had collected on a recent trip to Papua New Guinea. He said that one or two may represent new species.

Charlie opened the business meeting with the annual election. He said that all officers had expressed a willingness to serve again. A quorum was present and since there were no nominations from the floor, he asked for a show of hands in assent. Assent was unanimous. Concering directors he said that Larry Potter had readily agreed to step down because of demands of his profession on his time. Milton Werner was proposed as his replacement. Assent to the revised Board was also unanimous.

Charlie reported that he , Carl, and Milton had visited the branch of the Chase bank that holds the Club account with a complaint about the service charges applied to our checking account. After a review of the account, all service charges on the account were waived resulting in an annual saving of about $250 a year. Charlie added that the April auction had netted about $2170.

Turning to plans for the coming year he said that Gary Rosenberg and Peter Dance are scheduled to present programs. Goals for the near future include efforts to introduce conchology to young people, especially through their schools, to keep programs tightly focused on shells, to try to mount more field trips, and to induce more members to contribute material to Shell Notes.

The door prizes were two Conus garcia, won by Ed Cowles and Milton Werner, and Conus generalis, won by speaker George Shuler. It was noted that the garcia, De Motta, 1982 were dredged in deep water by shrimpers off Honduras in November, 2003.

George Shuler's subject was " Conservation by Design: Saving Freshwater Mussels." He noted that the four most endangered species of mollusks in the United States are freshwater. With DVD maps, charts, and photographs he described a project, which he headed, to save a population of dwarf wedge mussels in the Neversink River in eastern New York State. A dam, one of a series built by the U.S Corps of Engineers, had cut off the mussels from the river's free flow. Agreement was reached to sacrifice the dam rather than the mussels, and George's photos showed the steps in the removal of the dam and the before-and-after effects on water movement. He noted that the State will remove other dams for the same reason. He added that the river flows through an area of no limestone and is fed by acid rain, so that shells are being dissolved during the lives of the mussels. Therefore they leave no fossils.

THE PRESIDENT'S ANNUAL LETTER

During 2004-2005 we continued to make modest progress in meeting the myriad challenges the club faces. The easy part has been streamlining the overall administration of the club. By the begining of the 2006 we hope to distribute Notes largely by e-mail. Since around 2/3 of our members have e-mail addresses, we hope a large part of our communication can be done on the internet which saves time and expense. Dues do not cover our annual expenses so a successful auction, which netted over $2000, helped keep the club on a sound financial footing with cash balances exceeding $11,000. Our ties with the staff at the Malacology Dept. at AMNH continue to strengthen.

Our biggest challenge for the coming year continues to be increasing membership and attracting individuals to our meetings and outings. It also means energizing our membership base. Despite a good program line-up attendance has been erratic. Second is generating original material for Notes.

We are currently invisible on the Web. To increase membership we must be visible to the next generation and that means establishing a basic website by year-end. Since the Club has no technical expertise among its members, we will be contracting with someone to set up, and if necessary, maintain the site. We will also continue to provide quality programs and encourage you to attend as many of our meetings as possible.

We have discussed strengthening our ties to the local community through schools and environmental groups. A grant to a student doing studies furthering the knowledge of mollusca in the area of New York City and environs is one possibility. Combining one or more outings into an opportunity to do a survey of land snails for one of the conservation groups is another. These may present opportunities to reach a younger generation who may become members and gratify members who enjoy outings, while furthering our knowledge of molluks living in our area.

Finally, Shell Notes has suffered from a lack of original material and has become reliant on reprints. Each of four officers has agreed to contribute an article in the coming year which should help, but we need articles from you if Notes is to be a success. So send us some piece of club history you may want to share, perhaps recount one of your shelling adventures, or send your scientific paper on mollusca.

The closing paragraph from my last year's letter is equally applicable this year. At a time when shell clubs with ageing memberships face a fierce competition from so many alternative sources of entertainment your support is vital. I hope I will have the opportunity to see more of you during the year, and for those of you where distance makes it impossible to join us I appreciate your loyalty and support and hope the internet will give us a chance to keep in touch.

Regards, Charlie

EVEN A CLAMDIGGER CAN SUCCEED IN LIFE!

Mr. Gil M. Cassagne scanned the arc of his business career in a bio that appeared in the May 22, 2005 issue of the New York Times (excerpted below). It has brought him to the height of president and CEO of an estimable corporation. Since he started from the depths of clam digging there's a touch of Horatio Alger in his saga. So any clamdiggers who may read this---reach for the stars! Common ordinary shell collecting doesn't figure as a hobby or study in the aqueous segment of Mr. G's career, but assuredly even persons thus afflicted can still hope for a decent life. Keep plugging!

NEW YORK TIMES-- 6/22/05

Grew up on Long Island......My first job was in seventh grade as clam digger on the Great South Bay. You could earn $25 for digging 500 littleneck clams, a bushel's worth, or $5 for the same amount of chowder clams, which could only be used in soup. It didn't take long to figure out I wanted to find the places in the bay that had the littlenecks. On my best day, I earned almost $200, which was more than my dad's daily pay.

At the end of the day, seafood buyers would come in refrigerated trucks to buy clams for the New York City fish markets and restaurants. If a driver was late, he was a motivated buyer, because most of the clams had already been sold. My buddies and I would band together and bid up the price by $2 or $3 a bushel.

That job taught me discipline and the value of hard work, but I also learned an important sales premise: one extra call at the end of the day can make a difference. Digging that extra 15 or 30 minutes each day had a significant impact on what I earned over the summer. It also taught me the importance of doing something I enjoyed, like being on the water, earning good money and getting a tan.

Note: the Publication Board, editorial staff and production crew of this journal are unanimous in cautioning against "getting a good tan." What the sun does is burn. If skin cancer doesn't worry you, what about looking like King Tut while you're still ambulatory and on public display?

WHATCHAMACALLIT --NY TIMES--3/20/05

In the April issue of Discover, Joshua Foer relates how a seemingly technical controversy over the rules for classifying and naming species is resonating through the scientific world. At issue is whether to replace the 270-year old Linnaean naming system with a new method called PhyloCode that would more closely reflect evolution and ancestry–a change that could involve giving every living thing a new name.

Science that is supposed to shed its old habits when better ways of doing things come along. But who decides when one way of doing things is better than another? And what happens when not everyone agrees? "Science, the process is objective,"says Yale paleontologist Jacques Gauthier, one of the leaders of the PhyloCode movement. "But scientists are people and they aren't objective."...

Under the traditional system, for example, mammals might be defined as warm-blooded animals with hair and mammary glands. Under PhyloCode, they might be defined as all creatures descended from the most recent ancestor of Homo sapiens and the platypus....

What about all those hierarchical ranks in the Linnaean system, like phylum and family? Because they are just artificial constructs that reflect nothing in the natural world, they become unnecessary under the PhyloCode....Gauthier says, "Everything else has changed since Darwin, but not this."

SURVIVAL OF THE FITTEST CLAM-- NY TIMES-- 4/12/05

Paralytic shellfish poisoning, or P.S.P., is a health hazard on both the East and West Coasts, caused by eating clams or other shellfish contaminated by toxins produced by certain kinds of algae.

While these saxitoxins, as they are known, can harm and even kill people by blocking the flow of sodium ions across cell membranes, interrrupting nerve impulses, they aren't too good for many clams, either. Yet others are unaffected by them, accumulating them so that when the clams are consumed, the eater gets a lethal dose.

Scientists from Canada and the United States have identified a genetic mutation that makes some shellfish resistant to saxitoxins. They report in the journal of Nature that it consists of a change in one DNA nucleotide, affecting a single amino acid so that the toxins cannot block the clams' own flow of sodium ions.

The researchers, including Dr. V. Monica Bricelj of the Institute for Marine Biosciences in Nova Scotia, studied populations of soft-shell clams in two locations, one where blooms of toxic algae, known as red tides, regularly occur, and one with no history of algal blooms. They exposed both to saxitoxins, monitoring changes in burrowing behavior (a measure of how poisoned the clams were getting) and mortality.

They found that clams from the area with a history of red tides were less sensitive to the toxins. DNA detective work showed how the genetic makeup of these clams differed from the ones from the bloom-free area.

The researchers note that this is a case of survival of the fittest: in red tide areas, clams that don't have the genetic change don't make it; those that do thrive and reproduce, spreading mutation through the population. There may be other bivalve species with similar mutations, which could lead to further understanding of how toxin resistance spreads.

2005 NYSC AUCTION RESULTS

This year our carryover inventory of books, bargain table items, and shells for auction was at an all-time low. Fortunately generous donations from AMNH, shell dealers and members provided us with a diverse and interesting selection of items we could offer at auction. Attendance was good, and spirited bidding ensued for several rare shells. After all the activity, the net addition to the club's treasury is $2172.

Since the donations of large collections from estates have long since been liquidated, our challenge each year is to receive enough donations for the current year to mount a successful auction.

A special note of thanks to Romuald Czepulkowski who once again chaired the event, and tirelessly put together the auction list and material for the bargain and sales tables; to Dorothy Jensen for the use of the Broadway Dance Studio, and finally to all who labored behind the scenes to make the event a success.

DONORS TO THE NYSC ANNUAL AUCTION APRIL 10

All of us at the NYSC would like to thank the following donors, whose generous contributions of shells and other items insured another successful auction for the Club. Dues cover a small portion of our operating expenses. The proceeds of the auction allow us to keep our dues affordable, continue the publication of Shell Notes, and put on quality programming throughout the year.

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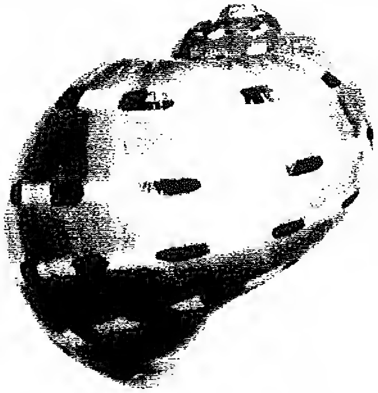

The Philadelphia Shell Club presents
The 2005

PHILADELPHIA SHELL SHOW

at The Academy of Natural Sciences

Saturday and Sunday, October 8 – 9
10 am – 5 pm

- Exhibits of rare and beautiful shells
- Educational and artistic displays
- The famous bazaar, featuring specimen and decorative shells, jewelry and shell-themed items for the home
- Free entry with regular Academy admission

*The Philadelphia Shell Club hosts the **Shell Show Banquet** at the Academy on the Saturday evening from 6 – 10 pm. All are welcome.*

*For tickets, at $35 per person, or for further show information, contact **Paul Callomon: (215) 405-5096** callomon@acnatsci.org*

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THE ACADEMY OF NATURAL SCIENCES
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INC.

FOUNDED JAN. 1949

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These NOTES are mailed to all members. Items and articles for publication in the NOTES should be sent to the Editor.

Annual dues are payable each September as follows:

Individual Membership---------------	$12.00 per year
Family Membership ------------------	$15.00 per year
Corresponding Membership---------	$10.00 per year
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Please notify the Membership Officer, Charles Whitman, of any change of address.

NEW YORK SHELL CLUB NOTES NO. 376 SEPTEMBER 2005 - JUNE 2006

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CLUB EVENTS 2005-06

September 11th Gary Rosenberg, Associate Curator and Chair of the Malacology Department at the Academy of Natural Sciences Philadelphia: "An introduction to the Ovulids, Cowry Allies and Living Animals".

October 7th Carpool to the Philadelphia Shell Show.

November 11th Marla Coppolino, the collections assistant in the Malacology Department at AMNH on "Shells from the jungle: mollusks found by the AMNH Belgian Congo Expedition"

December 10th Holiday social at Charles Whitman's home.

January 8th Member Carl Ehrlich on recent diving trip to Sulawesi, Indonesia.

February 11th Cancelled due to snow storm.

March 12th Sue Hobbs of the Jersey Cape Shell Club and Philadelphia Shell Club on her recent trips to Japan to meet with local malocologists, visit shell museums and shelling sites.

April 9th Annual NYSC shell auction.

May 14th DVD "Aliens from the Deep": the amazing ecosystem of deep sea hydrothermal vents.

June 18th Annual meeting, followed by a presentation on "Why shells have latin names" by member Susan Hewitt, field associate at AMNH

HIGHLIGHTS OF THE SEPTEMBER MEETING

The 526th meeting of the New York Shell Club was held in the Linder Theater at the American Museum of Natural History on Sunday, September 11, 2005.

Charlie mentioned the October trip to the Philadelphia Shell Show and noted the necessary names and phone numbers for those who would want to take advantage of carpooling.

The speaker was Dr. Gary Rosenberg, chairman of the department of malacology at the Philadelphia Academy of Natural Science. His subject was "The Allied Cowries (Ovulidae) and Their Living Animals."

The family shares many features with true cowries. All of the myriad of species of Ovulidae are predators on living corals. One difference is the location of the protoconch, which in Ovulidae is nacred over. Another is that in many the inner lip is edentulate. There is considerable variety in shell shape and in color. Some incorporate color from their food - for example, sea whips - into their mantles, and therefore into their shells. Gary suspects that speciation in the family was driven by differences in the hosts they can feed on.

His talk was illustrated with intricate charts of relatedness that included shell photos. The charts are based on DNA studies. Gary's illustrations, all digital, included photos of shells and animals, and of web pages that are useful in creating a key to differentiation of species.

PHILADELPHIA SHELL SHOW

A group of eight NYSC members attended the annual Philadelphia Shell Show of the Philadelphia Shell Club, which is celebrating its 50th anniversary. On the ground floor dealers from South Africa, Italy, California, Hawaii, Florida, and New Jersey showcased an elaborate selection of shells and books. Our members were seen actively purchasing specimens to add to their collections, since this is one of the few opportunities we have to examine specimens prior to purchase.

On the second floor, a large exhibition room with excellent lighting housed the extensive artistic and scientific exhibitions. The overall quality of the displays was excellent, with something to appeal to the diverse interests of all who love shells.

The artistic exhibits included a selection of fine and creative single and double sailor's valentines. This beautiful grouping was happily complimented by a museum exhibit of numerous 19th century examples, and a few modern ones (including one that was raffled off to a lucky winner.)

The shell display room was also filled with 32 excellent scientific displays which deservedly won ribbons and trophies. Our favorites: a very interesting display of world-wide carrier shells, by Vicky Wall of North Carolina; an impressive collection of Western Atlantic mollusks (many self-collected) by Charlotte Lloyd Thorpe of Florida; several display cases of self-collected miniature shells with very good color photographs, all by Ed Shuller and Jeanette Tysor of North Carolina; a startlingly wide-ranging display of world-wide cones self-collected by Gene Everson of Kentucky; and a very beautiful growth series of *Pleurotomaria rumphii* by Patricia Whitaker of New Jersey. There was also a very lively and somewhat humorous, but also accurate and scientifically interesting, set of cases on the invasive species, the Zebra mussel, put together by Vicky Wall.

Some of us stayed on to hear Tucker Abbott's widow, Cecilia, who in honor of the Club's 50th anniversary made a presentation, including some slides of Tucker not previously seen. It provided warm and humorous insights into the man who did more than anyone to popularize malacology. His love of shells was kindled when he first read Julia Rogers' book on shells in a local library. Slides showed him with his mentor William Clench, his wife, Ruth, and other Harvard colleagues. In addition to shells he enjoyed gardening and several shots showed the fruits of his labor. On the light side was a group shot of a Halloween party with Tucker fully costumed sporting an afro. Cecilia recounted one evening Tucker had left the originals of the first edition of "Compendium of Seashells" in his car. He decided to retrieve them, and it was fortunate that he did-- as his car was stolen later that evening.

The slides also included some familiar faces who graced or currently grace the staff of AMNH. A young, slim Walter Sage was seen in a group shot with full head of black hair. A young smiling William Emerson with full mane of dark hair appeared in another. Bill Old's collection of ceramic land snails was featured in still another. And finally Paula Mikkelsen was included in one of the more recent shots.

After that interesting presentation some of us stayed on for the banquet and awards presentations and enjoyed a good meal, tasty desserts and the company of fellow shells enthusiasts.

HIGHLIGHTS OF THE NOVEMBER MEETING

Charlie reported that he and others were working on plans for a field trip, which may be survey of land snails in upstate New York. He announced that the December meeting would be held at his home.

The Shell-of-the-Month, presented by Romuald Czepulkowski, was the turrid *Brachytoma varicosa.* He described the species as a complex in which lines between differences in characteristics are blurred making it seemingly impossible to know if they represent one species or more. He pointed out the features that shade into one another, and noted that two books on turrids use the same photographs over different specific names.

The speaker was Marla Coppolino, collections assistant of the AMNH museum's department of mollusks. Her subject was "Shells of the Jungle", a review of of the museum's 1909-1915 expedition to the Belgian Congo, now Zaire. Malacologists were one of the groups on the scene. She noted that many of the explorers died there. The shell collectors brought back 4,300 lots of terrestrials, which were subsequently identified by Dr. Henry Pilsbry, who declared 350 of them to be new species.

Marla also commented on the museum's mollusk collection, and said that about 20% of it has been entered in a computerized catalog. She also noted that during Word War II the mollusk collection was stored in New Jersey, for safety. On their return trip, 23 of the Congo lots were lost.

Among the photos that Marla screened were some of the museum's wet storage facility. She also mentioned the department's recent acquisition of a Nikon D-70 camera, which allows requests for loans of type specimens to be met by transmitting digital photos and text. She reported that she is working on a Congo gallery to be added to her website.

The door prizes were *Liguus fasciatus*, won by Sandy Kay, *Dicathais orbita,* won by Larry Potter, and *Protothaca staminea*, won by Milton Werner.

DECEMBER HOLIDAY PARTY

The 529th meeting of the New York Shell Club, on Sunday, Dec. 11, 2005 was an informal holiday gathering in the Manhattan home of President Charlie Whitman. The attractions of the afternoon were the opportunity for relaxed conversation, a variety of snacks and noshes, a bird's eye view of the East River, Roosevelt Island, and Queens, and a look at the many samplings of fabrics collected by the Whitmans in South America. These examples are not only attractive, but remarkable for the fact that they were designed, woven and dyed by women using their own instinctive expressions of beauty, their home looms and natural dyes.

The only business conducted was the announcement that the Executive Committee had conferred life membership on Al Scarpetti and Milton Werner.

HIGHLIGHTS OF THE JANUARY MEETING

Attention was drawn to a selection of cowries and *Polymita picta* that Al Scarpetti had brought in to turn over to Romuald Czepulkowslki as donations to the April auction material.

The Shell-of-the-Month, 16 lots of *Cymatium*, subgenus *Septa*, were laid out by Romuald Czepulkowski. They illustrated the difficulty of differentiating species. He had on hand a 10-power magnifier so viewers could see the minute differences in texture and sculpture that reveal identity.The difficulty is compounded because the swimming larvae of the genus can remain on the move for many months, which results in mixed populations. Another cause of mixing is the release of ships' water ballasts containing larvae. He noted that the Museum's collection includes some misidentifications, and that there is outdated material in a 1980 book.

The speaker was Carl Ehrlich, who described a recent shelling trip to Sulawesi. In addition to the shells displayed, he showed slide photos lent by a professional photographer. He noted that the almost simultaneous appearance of a National Geographic article on the undersea life of Sulawesi was only a coincidence. Its subject was the "oddballs" of the Lembeh Strait, which is were Carl did his collecting. He found many of the shells in the Strait are darker in color than their siblings living elsewhere. Among the shells in the photos were *Ovula ovum*, bubbles, volutes, olives, cones, and cowries. The unshelled were represented by nudibranchs, octopuses, and cuttlefish. He reported *Cypraea* with transparent mantles, noting that there are *C. tigris* with translucent and opaque mantles.

Romuald reminded that donations for the auction are needed. Larry Potter said the Whitmans should be thanked for hosting the December meeting. Spontaneous discussions brought out views on meeting dates, field trips, speakers, workshops and perhaps some research and reporting on conchologists and malacologists in New York's past.

HIGHLIGHTS OF THE MARCH MEETING

Carl Ehrlich had on display cones from the Solomons and other localities.

Howard Israel mentioned that the internal shell of the cuttlefish--the cuttlefish bone--is used in the jewelry industry in making forms into which molten gold is poured.

The speaker was Sue Hobbs of the Jersey Cape Shell Club, who presented a slide show, with comments and observations, on the 2005 national conference of Japanese Malacologists, held in Osaka. Her photo coverage included some of the people involved, the spaces used, and the many shell exhibits, and also the attractions of the city and its surrounding areas. She also showed some the villages she later visited which had retained their age-old traditions. Finally, she showed slides of some well known shelling locations, and live mollusks at the local markets.

The door prizes were *Canarium urseus*, won by Sue Leibowitz; *Quidnipagus palatum*, won by Howard Israel, and *Modiolus barbatus*, won by Milton Werner.

HIGHLIGHTS OF THE APRIL AUCTION

The annual New York Shell Club auction was held on April 9, 2006 at the Broadway Dance Studio. Bargain table selections and viewing of the material to be auctioned commenced at 2:00 P.M. A broad selection of mollusks, books, magazines, and some fossils were available for purchase as a result of generous donations by shell dealers, members, and friends of the club. The list of auction and bargain table items were reputed to be one of the best in years. The resulting spirited bidding netted the club $2316 after expenses to be used to fund the club's activities.

Highlights of the bidding were a juvenile *Lyria grangei* which sold for $200 and a Cypraea aurantium Gmelin which sold for $60. The raffle prize was a *Spondylus linguatecis*. Door prizes were *Melongena patula*, and two *Conus quincius*. All attending enjoyed food, drink and the companionship of fellow enthusiasts in support of a worthy cause.

JUNE 18 ANNUAL MEETING

A quorum of members was present for the annnual meeting. The proposed slate of officers were the following:

Charles H Whitman, President
Carl Ehrlich, Vice-President and Treasurer
Milton Werner, Secretary
Directors—
  Romuald Czepulkowski
  Milton Werner
  Al Scarpetti

Following a vote in which the Directors and Officers were re-elected unanimously, Charlie summarized the financial condition of the club and its future plans. As a result of the successful auction the Club's has financial assets at Chase Bank of $14,657 as of our fiscal year-end (May 31, 2006). The financial condition of the Club continues to be sound with expenses tightly controlled. However these are not covered by members' dues and the NYSC would show an annual operating deficit if not for the proceeds from the annual auction. It is anticipated that expenses will increase next year to cover the cost of establishing and maintaining a website.

WEB PAGES FOR THE MUSEUM'S BELGIAN CONGO EXPEDITION MOLLUSKS AT THE AMNH WEBSITE

The Malacology section of AMNH is pleased to announce an introduction of web pages to represent its Molluscan material collected during the Museum's Belgian Congo Expedition 1909-1915. The mollusk galleries in this site bring together images of types, as well as images of original labels, catalogue cards, original description, and other related material.

http://research.amnh,org/invertzoo/malacology/collections/belgian_congo/belgian_congo.html

These pages were created by Marla Coppolino, Collections Assistant in AMNH Malacology, with images of types taken by Jason Larimer.

Are you finding Fossil shells on the outer beaches of New York and New Jersey?

by Susan J. Hewitt

Field Associate, Division of Invertebrate Zoology,
and currently on the Volunteer Staff in the Division of Paleontology
American Museum of Natural History

The answer to the title question is, "Yes, you probably are!" and the purpose of this article is to try to explain something about the fossil material that washes up on our local beaches. This is in fact a very common and widespread occurrence, but most people are unaware of it.

……

On many sand beaches of the outer Atlantic coast of New York and New Jersey, the beach drift can be misleading to a shell collector, because of the presence of fossil shells. These are usually just as common as or even more common than the fresh shells, and are mixed in with them higgledy-piggledy. Unfortunately it is not easy to tell which is which, and many of us have brought home fossils shells without realizing it, because to the casual eye they look very nearly the same as recent shells.

I should explain that these fossil shells are not embedded in rock, they have not turned to rock, and they are not bizarre and unfamiliar species. They are considered fossils because they are so extremely old – they date from the Pleistocene period.

So these fossil shells are old, but they are of species that still exist today, and some of them can look almost exactly like some bleached-out recent shells. However, at least some of the time, a few subtle differences in appearance can indicate which is which. The fossil shells have no periostracum or ligament. They are faded. Very often they are also discolored, although I have to point out here that the odd-looking black shells you find on our beaches are not fossils-- they have simply been buried in black anoxic mud in the back bays and the sulphides in that mud have stained them black.

OK, so the fossil shells are not black, but they are often some unnatural-looking shade of light-grey or mid-grey, but they can also be off-white, tan, or faintly rust-colored.

The fossil shells also have none of the high shine or partial translucence that characterize a fresh shell-- instead their surface is opaque and extremely dull-looking, even in the interior of the shell.

It used to be the case that the oldest shell material commonly found washed up on our area beaches was considered to be only about 5,000 years old, and so technically it was called "subfossil". However, now it seems fairly clear (at least in eastern Long Island, as reported in 1976 by Thomas C. Gustavson of the University of Massachusetts) that the material is even older, that these ancient shells are in fact Pleistocene fossils. In other words if the situation on all of the local outer beaches is the same as it is on eastern Long Island, then these ancient shells are more than 11,550 years old. They date from the Ice Age.

We tend to think of the Ice Age as a continuous time of cold temperatures, with glaciers covering the land, but in fact the Ice Age was a time of extreme climatic fluctuations that were cyclical in nature. There were very cold glacial periods, punctuated by warm interglacial periods, which at their maximum were a lot warmer even than the current climate!

As I mentioned before, the fossil shells you find locally are the same species as modern ones from the east coast of this country. Many of them are the same species that you can find in the ocean off New York and New Jersey now, except that some species are noticeably more (or less) abundant than they used to be.

However, if you search thoroughly enough you will eventually come across a few fossil shells of species that you would expect to find down in the Carolinas rather than up here in the northern states. The shells of these more southerly species date from a warm interglacial period, when the ocean water temperature here was quite a lot warmer (2° to 11° C warmer) than it is now. And, interestingly enough, you may possibly find a few fossil shells that have washed out of deposits from a slightly earlier time, when the ocean temperature was colder (3° to 7° C colder) than it is now.

As well as these ancient shells, there are almost certainly other shells on the beach that are only decades or hundreds of years old: in other words, not fossil, just old.

Can we tell how old or ancient the shells are that we find? In some cases we can make a good guess, but in a lot of cases we really cannot be certain. Radiocarbon dating, although expensive and inaccessible to most of us, is the only completely reliable way to determine if a shell is ancient or not.

But why do all these fossils and older shells wash up on the beach? The barrier islands on the outer coast are really nothing but very large and rather ancient sand bars. Once you get down under the top soil, these islands consist of sand deposits of various ages-- old, very old and ancient. Despite modern efforts to stabilize these islands as much as possible, the edges of them are always being reworked and reformed to some extent. In one area sand may be accumulating, whereas another part of the island is washing away. Wherever the coast is being significantly eroded, either intertidally or below the water level, shells from those older, much older, or ancient deposits are exposed to wave action, and can then wash up.

These fossil shells have not always been recognized as such. In "Seashells of Long Island" published by the Long Island Shell Club in 1988, the discolored shells are referred to as 'subfossil' rather than fossil. Some records of species of shells listed in that book are described as having been found as "dead valves only" and I suspect some of these may also have been based on equally ancient shells.

In Jacobson and Emerson's 1961 book, "The Shells of the New York City Area", some species are described as being found only in dead, discolored and broken condition. It is also mentioned that some species found in this condition no longer live this far north and that "Some believe... [this is] ...because of the increasing coolness of our off-shore waters", but no explanation is offered of what this presumed temperature change might indicate in terms of the possible antiquity of the shells involved.

So at any rate, it is good to be aware when looking at beach drift on the outer coasts in this area that you probably will find some shells that are thousands of years old, and that these are fossils from the Pleistocene age, from the Ice Age, but that you may not easily be able to tell them from shells that are much more recent than that. It's not always easy being a beachcomber!

(An article on the shells of Long Island, listing both fossil and Recent species found by Susan Hewitt, will be featured in a subsequent issue of NYSC Notes.)

BOOK REVIEW ELECTRONIC PUBLICATION REVIEW

by Susan J. Hewitt

2,400 Years of Malacology, 3rd Edition
by Eugene V. Coan, Alan R. Kabat and Richard E. Petit,
First published in 2004 by A.M.S., updated regularly.

Find this publication on-line at:
http://erato.acnatsci.org/ams/publications/2400_malacology.html

It often happens that a researcher in malacology needs to know *some facts about the history of an individual, a publication, an institution or even an oceanographic expedition. For example, I may think I know who the author of a certain species was, in the sense that I know that a certain shell is called *Rissoina decussata* (Montague, 1803), but, who was this Montague? When was he born, when did he die, and which country did he live in? And if I need to know even more than that about him, and his life, then which publications do I turn to for that information? What are the references? And come to that, who was C. B. Adams? Who was d'Orbigny? What did he look like? Who was Nowell-Usticke? Where do I start searching in order to find out these things?

Prior to this publication there was no resource where you could directly get the more simple information, and also find out where the more in-depth information would be. Now, finally, one publication exists that serves these needs. This new book is in effect a sort of elaborate and comprehensive signpost, or index, and it can save people a great deal of work when they are attempting to delve into the literature for biographical and other historical information.

2,400 Years of Malacology, 3rd Edition, is a book in electronic form, which can be found on the internet at the above website address. (It is part of the A.M.S. website, which is itself part of the Academy of Natural Sciences at Philadelphia website.) The main section of the book is an alphabetical catalogue of 5,000 malacologists worldwide, historical and living. As well as professional malacologists, the book also lists many other people who have made significant contributions to the field of malacology, including founder figures such as Aristotle, modern serious amateurs such as my friend Carole Hertz of the San Diego Shell Club, and hundreds of conchologists, paleontologists, and others involved with mollusks. The entries start with the name, dates, and country of birth, and then refer the reader to literature sources that contain more complete biographical accounts and/or portraits.

In addition to the main catalogue, this e-book also includes three very useful appendices that are alphabetical catalogues listing literature sources for background information/historical accounts of oceanographic expeditions, malacological institutions and organizations, and malacological (and related) publications.

Happily for all of us, access to this very useful publication is without charge, and without registration. People can use this resource just as it is, in the HTML version on-line, which is very convenient, or they can down-load it as a PDF (either all at once, or in conveniently sized sections) and then print it out as hard copy, turning it into a more conventional "book" of over 600 pages. However, I personally feel the on-line version is preferable for several reasons, not the least of which is that it will be updated at regular intervals, becoming ever more complete.

I am no expert on webpage construction, but one comment for further improvement would be that if the "table of contents" consisted of live links to the appropriate sections, the book would be much faster and easier to use on-line. Also extremely useful would be the ability to search for an entry in the main section by typing a name into a search slot, or at least the first letter of the name. And it would also be very convenient if the scroll function could be made to indicate what number page you are on, as you scroll through the book.

I am not listed in the book, although I aspire to be. Here however, is the entry for one of the New York Shell Club's most illustrious members, Mr. Morris Jacobson. Remember that the references included are only those that contain biographical information on Jacobson, here mostly in the form of obituaries:

"Jacobson, Morris Karl (1906-1980; U.S.A.)

* Abbott, 1973: 316.
* R. T. Abbott, 1980. Morris Karl Jacobson (1906-1980). The Nautilus 94(4): 129, portrait.

- Anonymous, 1980. In memoriam Morris K. Jacobson. Levantina 29: 350.

* W. K. Emerson, 1981. Morris Karl Jacobson, 1906-1980. American Malacological Bulletin for 1980: iii-v [portrait, bibliography].
* W. K. Emerson, A. D'Attilio, W. E. Old, et al., 1980. Morris Karl Jacobson. New York Shell Club Notes 265: 1 1-9. portrait. [biography, bibliography].
* D. Raeihle,1980. Morris Karl Jacobson. New York Shell Club Notes 264: 1-2.
Abbott, 1987: 156
* M.P. de Oliveira & M.N. de Almeida, 2000:34 [portrait]."

The information in the book was extracted and condensed from a vast number of different sources. Clearly this publication required a staggering amount of work, and it is a generous gift to the community of malacologists from the three very well-respected authors, Coan, Kabat and Petit. Although the book is a great resource for professional malacologists and for serious amateurs who are engaged in research, it may not seem to be of much relevance to casual amateurs, but because no purchase is required in order to use the resource, and because it is so simple to use, it seems possible that anyone interested in shells might at some point want to consult this e-book in order to learn something more about one of the particular areas it covers. And for anyone reading this review who is not yet familiar with the phenomenon of, and the advantages of, on-line publishing, this publication might be a good place to start. It is a very fine piece of work and a valuable new resource. The authors deserve to be congratulated.

DONORS TO THE NYSC ANNUAL AUCTION, APRIL 9th

All of us at the NYSC thank the following donors, whose generous contributions of shells and other items insured another successful auction for the Club. Dues cover a small portion of our operating expenses. The proceeds of the auction allow us to keep our dues affordable, continue the publication of Shell Notes, and put on quality programming throughout the year

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A special note of thanks: to Romuald Czepulkowski who once again chaired the event, and tirelessly put together the auction list and material for the bargain and sales tables; to Dorothy Jensen for the use of the Broadway Dance Studio, and finally to all who labored behind the scenes to make the event a success.

NEW YORK SHELL CLUB INC.

FOUNDED JAN. 1949

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Club Events

Sep 10	Paul Callomon, Collections Manager for mollusks at the Academy of Natural Sciences in Philadelphia, on "Shell Collecting in Japan"
Oct 8	Carpool to the Philadelphia Shell Show
Nov 1	Richard Goldberg, prominent shell dealer and expert on terrestrial mollusks, on " A Tale of Two Snails", the spectacular *Amphidromus* and the Caribbean *Cerion*
Dec 10	Members invited to bring in unusual shells from their personal collections
Jan 14	Charles Rawlings, avid diver, shell collector and underwater photographer--photographs taken of live mollusks on dives in Indonesia and the Philippines.
Feb 11	Carl Ehrlich, member, diver and prominent shell collector on his recent diving trips in the Pacific. A second featur-- the video " Treasures of the Great Barrier Reef'.
Mar 1	Planned field trip to the South Fork area of Long Island cancelled due to bad weather.
Apr 29	Annual NYSC shell auction.
May 13	Event cancelled when speaker had to cancel
Jun 17	Annual meeting, election of officers, followed by Romuald Czepulkowski, member and shell authority, on "Does *Phyllonotus margaritensis* exist?"

THE PHILADELPHIA SHELL SHOW

For the past several years the New York Shell Club has sponsored an October visit to the Philadelphia Shell Show. This year eight of us gathered at noon in the cafeteria at ANSP to socialize and compare notes, and a few stayed on for the lecture and awards presentation dinner. National and international dealers were well represented, and a nice array of shells and shell literature were available at the bourse.

The scientific exhibits formed an interesting cross section. One creative exhibit showed "The natural history of *Liguus fasciatus* (Muller, 1774)" presented as a board game. With rolls of the dice, you progress through the life cycle of the Florida tree snail. I enjoy growth series, so I was drawn to an exhibit of the Florida horse conch, *Pleuroploca gigantea* (Kiener, 1840) the second largest gastropod after *Syrinx aruanas*, showing a complete growth series from egg casings to adults including samples of its prey (tulips shells, whelks, bivalves). It will make it easier to identify the juveniles of this commonly found species on future outings. Another exhibit tackled the topic of "Why are marine snails on both sides of the Isthmus of Panama similar?", highlighting the "why" with exhibits that showed 1) marine snails that are extinct on the Atlantic but live on the Pacific (e.g. *Jenneria pustulata*), 2) cognate species on both sides (*Strombus galeatus* and *Strombus goliath*, and *Melongena melongena* and *Melongena patula*), and 3) species extinct in the Pacific which still live on the Atlantic (*Cassis tuberosa*). This was an interesting introduction to a complex topic. Another exhibit was an introduction to "Those deadly snails", showing several species of cones with the radula used for harpooning prey and injecting poison, also cones tracking dinner, and their venom apparatus. After seeing this exhibit, novices will certainly handle cones with more respect! For the collectors, there were beautiful exhibits of *Spondylus* and *Chama* attached to coral, and an extensive exhibit of nine cases of scallops, with one devoted to over 60 color variations of *Proteopecten glaber* (L. 1758) in pink, black and white, orange, yellow, brown, white and other colors.

The artistic side of the show had more exhibits than in prior years: intricate sailor's valentines, shell jewelry, and shell paintings. A novelty highlight was a full-size, custom made, wooden surfboard with extensive abalone nacre inlay.

Several of us stayed on to hear Dr. Baldomero Olivera's presentation on his latest research into the toxins and ecology of the cones. Most cone shells (and there are over 600 species) use harpoons to inject powerful neurotoxins in order to paralyze their victims. The most dangerous of this group is *Conus geographus*. This is a large aggressive cone about the size of your fist, armed with a poison that Dr. Olivera equated to being bitten by a cobra after eating a meal of poisonous puffer fish! Of humans injected and not treated immediately, the fatality rate is 70% within three hours. Dr. Olivera discussed how conotoxins (whose chemistry varies between and within species) is of value to humans. Conotoxins are widely used to identify specific ion channels in cell membranes, which control the transmission of impulses by nerves. About 80 patents for medical applications have been awarded to date.

HIGHLIGHTS OF THE JANUARY 2007 MEETING

Romuald Czepulkowski had on display a number of specimens of Drillidae, from the complex Drillinae. He noted that the AMNH museum's mollusk department no longer has a collection manager, which leaves us without a major source of auction material. He asked for donations from members, as soon as possible. He added that part of the work of the mollusk collections manager at AMNH has been taken over by another department.

The speaker was Charles Rawlings, a well-known underwater photographer, and his subject was "Living Mollusks." Most of his pictures showed his subjects in their habitats, with the use of strobe lights. Mantles were major features in this series, startling in their vivid coloration and for the intricacy of their folds, fronds and papillae. The shells included *Cypraea*, ovulids, *Cyphoma*, cones, bivalves, cuttlefish and squid. An octopus was shown mimicking the coloration of several bottom areas that it moved over. He also showed schematic drawings of many of these various animals, identifying and locating body areas and organs.

Abducting *Nautilus* for a photo shoot carried out at reasonable depths, he said, is best done by first setting a mesh trap at 1500 feet, baited with chicken necks. Cephalopods are a favorite item in island cuisine. Their eye structure is much like that of human eyes, and has been shown to project a similar image.

Also in the photo array were tuns, harps, volutes, olives and egg masses.

The door prizes were *Chlamys hastata helvicia*, *Cypraea vitellus* and *Carditamera floridana*.

HIGHLIGHTS OF THE NYSC ANNUAL AUCTION

The New York Shell Club held its annual auction on April 29 at Dorothy Jensen's Broadway Dance Studio. At 11:00 a.m. business opened at the bargain and sale tables, and viewing of the auction items commenced.

With very little material left over from prior years, those in the know harbored a healthy degree of skepticism over whether there would be enough material on hand to mount a successful auction. Once again, the generosity of dealers, friends and members saved the day, and the NYSC netted $1,437 for its treasury. Attendance was somewhat lower than in prior years. With pizza, cakes, wine and soft drinks fueling the bidders, high bids were $180 for a *Cypraea hirasei*, followed by $45 for a *Cypraea aurantium*.

As always, the auction represents an opportunity to add to your collection, and to socialize with fellow enthusiasts while supporting a worthy cause.

HIGHLIGHTS OF THE JUNE 17 ANNUAL MEETING

The annual meeting was called to order on June 17, 2007 at 2:00 P.M., in room 319 at the American Museum of Natural History. All officers and Directors were running for re-election. No nominations were made from the floor.

The proposed slate of officers was as follows:

Charles H. Whitman, President
Carl Ehrlich, Vice-President
Milton Werner, Secretary
Directors, Romuald Czepulkowski, Milton Werner, Al Scarpetti

A vote followed in which the Directors and Officers were re-elected. Charlie then proceeded to present a state of the NYSC report. The clubs finances are stable, with financial assets at Chase Bank of $14,743, virtually unchanged from last year. Since members' dues do not cover the Club's expenses for speakers, room rental, Notes and mailings, the proceeds from a successful auction are vital for the financial health of the Club. We will continue to try and contain costs by using e-mails to send meeting reminders, dues notices and Notes to those with computers.

Following the annual meeting, member Romuald Czepulkowski presented the taxonomic challenge, "Does the species *Phyllonotus margaritensis* exist?"

SHELL SNIPPETS

* *Moonsnail on a hook?*

It was the annual fall striped bass fishing foray out of Padenarum, Massachussetts, a gorgeous fall day: full sun, light waves, but poor fishing. We caught and released several undersized stripers. Our only "catch of the day" was a *Lunatia heros* caught in 19 feet of water on a menhaden chunk, one quarter mile offshore from Squibknobit Beach, Martha's Vineyard. The bait had been down no more than 5 minutes when I retrieved it to check its condition and found this aggressive mollusk firmly attached. Nothing like going out in hopes of catching dinner, and ending up with at best, an hors d'oeuvre. C. Whitman

* *Who says that mollusks don't get around!*

Naturalist, Kevin Krajik, writes in an article in the September, 2006 issue of Natural History magazine titled "Living the High Life" about a recent month-long expedition to the high central Andes of Peru that revealed an environment that harbors a Noah's Ark of previously undocumented species. Working at altitudes as high as 17,500 feet the group found "an astonishing variety of life-forms that survive amidst thin soils, low oxygen, staggering winds, powerful ultraviolet rays, and surface temperatures that can plummet 90 Fahrenheit degrees when night falls".

Among the discoveries, in a rocky pond near a 17,200 foot summit were some pea-size clams, that a mollusk expert, Robert P. Guralnick, of the University of Colorado at Boulder, would later judge to be among the world's highest altitude known clam species.

* *Cone venom and horses*

A recent article in the New York Times on horse racing mentioned that cone venom is injected into a horse's joints to ease pain and stiffness:
"As long as horses have been racing, some trainers have sought an advantage. Sometimes it has been primitive as primitive as using a battery-type device to shock a horse during a race. Recently, it is believed to have become as exotic as using injections of the venom of the cone snail, which is prized for it joint-numbing qualities".

* *Left-handed snails*

You know that the profile of malacology has been raised when "The Economist" deigns to include in the pages of its March 26, 2006 issue, an article titled "On the One Hand… Why some snails are left –handed." The article follows:

"In the human world, the left-handed seem at quite a disadvantage. Indeed, a whole industry has sprung up to supply this oppressed minority with everything from left-handed computer mice to mugs and boomerangs.

The world of snails, too, has its sinister minority. Hold a snail with the tip of the shell pointing upwards and the opening towards you, and the shell will normally coil away to the right.
Less commonly, it will coil to the left. Until now, biologists have been at a loss to explain what advantage these rare reversals in shell coiling offer. But Gregory Dietl, of Yale University, and Jonathan Hendricks, at Cornell, think they know the answer.

Dr. Dietl and Dr. Hendricks, who have just published their results in Biology Letters, looked at the question by examining fossil sea snails. They studied 1,722 specimens from six different species and found that right-handed snails were far more likely than left-handers, on a per-snail basis, to show evidence of a lethal confrontation with a crab. What they suspect is happening is that left-handed snails avoid the attentions of right-handed crabs because these dexterous crustaceans find it tricky to eat lefties.

To appreciate this theory fully, you need to understand a little about crab table manners. Modern-day right-handed crabs orient their prey with the shell pointing away from their body and the opening on the right-hand side. This allows the crab to insert a tooth-like appendage on its right-hand claw into the opening, thus cracking the snail's shell. The rest of the shell is then rolled towards the tooth in an anticlockwise direction, in order to remove it.

The process is rather like peeling a potato with a right-handed peeler. Peeling in the other direction is awkward. Thus, a left-handed snail presents a right-handed crab with a challenge, one it usually cannot be bothered to accept. Indeed, when Dr. Dietl and Dr. Hendricks tested their hypothesis they observed crabs picking up left-handed snails and then abandoning them. For humans, the equivalent is those really annoying pistachio nuts that accumulate at the bottom of the bag. They are simply more trouble to open than they are worth, and are thus likely to be tossed aside.

It all seems to parallel ideas about left-handedness in human cultures. Left-handers enjoy an advantage in some sports, such as tennis. In the past, it is theorized, they enjoyed a similar advantage on the battlefield. But that raises a further question: if left-handedness is beneficial, then why is it so rare? Here, Dr. Dietl and Dr. Hendricks, like many others before them, admit they are stumped. One possibility is that lefty snails have difficulty mating with their right-handed relations. Here, at least, parallels with humans appear to end."

……

An Article from Harry G. Lee

Harry G. Lee has generously allowed us to publish the following account of his recent land snail foray in Vermont. Harry has been a member of the New York Shell Club since 1962, although we don't see him up here very often. He lives in Florida and is very active in the Jacksonville Shell Club, contributing a great deal to their website www.jackshells.org and their newsletter, the Shell-O-Gram. Harry has expert knowledge both of Florida/Caribbean marine shells, and also the land snails of eastern North America.

Harry Lee joined the NYSC on his arrival at Cornell University Medical College in September, 1962. The preceding year, his college honors thesis treated the molluscan fauna of the Williamstown, Mass. area, but his interest in the land snails of the northeastern US originated in the back yard of his childhood home in Short Hills, N.J. a decade earlier. As a medical student, he reported on NJ land snails to the club (NYSC *Notes 96*: 2-3, Nov. 1963). He moved to Florida in the early 1970's, and only recently had a chance to reprise his New England snailing because of a series of family reunions in Manchester, Vermont. Reports of finds earlier in his VT campaign have appeared in the Jacksonville Shell Club newsletter (*Shell-O-Gram 45*(1): 2-6 [1-2/04] and *Shell-O-Gram 45*(5): 6-8 [9-10/04]) and on the web, at http://www.jaxshells.org/vermont.htm and http://www.jaxshells.org/vermontnew.htm

Readers who are not familiar with land snails, and who might be interested in learning how to recognize the species which Harry mentions, can consult the book "How to know the eastern land snails" by John B. Burch, 1962. And an excellent introduction to the land snails (as well as freshwater mollusks and marine mollusks) of our immediate vicinity is "Shells of the New York City area" by Jacobson, M. K. and W. K. Emerson, 1961.

Native land snail surveys in Bennington County, Vermont

by Harry G. Lee

In the fall of 2006, continuing a relatively new annual tradition, three generations of my wife's kinfolk, in-laws included, had a reunion at the family Vermont retreat, aptly named 'The Homestead', in Bennington County. Located just north of Manchester Center, The Homestead is sited in the valley of the famous trout stream, the Batten Kill, surrounded by the northernmost peaks of the Taconic Range; Mount Equinox, Little Equinox, Owl's Head, Aeolus, Netop and Dorset, which define the southern and western skylines.

Five and a half years ago, in 2003, while the other participants were occupied with mountain-climbing, shopping sprees, tractoring about, or TV football viewing, I began the practice of setting out for a fieldtrip or two during each weekend event. For accounts of the previous visits and illustrations of some of the shells see (for 2003):
http://www.jaxshells.org/vermontnew.htm and the Jan.-Feb., 2004 *Shell-O-Gram* 45(1): 2-6; (2003); (and for 2004):
http://www.jaxshells.org/vermont.htm> and the Sept.-Dec. 2004 *Shell-O-Gram* 45(5): 6-8).

During the 2006 visit and the 2005 visit I searched two localities: 1. a former station on the bank of Prentiss Brook, a tributary the Batten Kill, within walking distance of The Homestead, and 2. a marble quarry.

The two ecosystems differ very considerably: the first is a perennially very wet, mostly herbaceous, riparian lowland with a comparatively low calcium level, whereas the quarry area is montane hardwood forest with a microhabitat rich in calcium.

Not surprisingly, the two localities support somewhat different faunas, and this is particularly evident when comparing a list of the most abundant species: the wet lowland was rich in *Cochlicopa lubrica, Carychium exiguum, Gastrocopta tappaniana, Vertigo elatior, Oxyloma retusum*, and *Zonitoides nitidus*, whereas the limestone quarry was rich in several other *Gastrocopta* spp., as well as *Vertigo gouldii, Discus catskillensis, Nesovitrea binneyana, Striatura* spp., *Zonitoides arboreus*, and the large snails of the Polygyridae.

When the reader views the cumulative species account in the lists below, it will become clear that my persistent and thorough searches have gone well past the point of diminishing returns! Nonetheless, on this trip I was able to uncover a few new and exciting finds, as well as better and occasionally far more numerous specimens to be studied. Add to this my straightforward enjoyment of the Vermont landscape, and one may understand why these annual surveys offer a simple pleasure to which I have come to look forward.

Here follows locality data and species lists for the field trips of the last two years. Particularly noteworthy are the discovery of a nice living colony of *Vertigo elatior* near The Homestead, the first find of *Guppya sterkii* in New England, and the elusive *Gastrocopta corticaria*, which I have never found alive in half a century of landsnailing.

Please note that two species of introduced slugs were also found, but are not listed.

2005

Locality 1

Grass and soil sample, left bank of Prentiss Creek, 1 mi. NNE of Manchester Center, Bennington Co., VT. H. Lee! 9:30-10 AM, Sun., 10/2/05.

Total of 13 species. Those in **boldface** are new county records, of which two (indented) are new state records. Numbers in boldface, **(44) (45),** represent additions to the cumulative Bennington Co. species count.

Cochlicopa lubrica (Müller, 1774) Glossy Pillar
Carychium exiguum (Say, 1822) Obese Thorn
Columella simplex (Gould, 1841) Toothless Column
***Gastrocopta tappaniana* (C. B. Adams, 1821) White Snaggletooth (44)**
***Vertigo elatior* Sterki, 1894 Tapered Vertigo (44; this replaces misidentified *V. pygmaea*)**
Vertigo ovata Say, 1822 Ovate Vertigo
Punctum minutissimum (I. Lea, 1841) Small Spot
Oxyloma retusum (I. Lea, 1834) Blunt Ambersnail
Euconulus fulvus (Müller, 1774) Brown Hive
Nesovitrea electrina (Gould, 1841) Amber Glass
Glyphalinia wheatleyi (Bland, 1883) Bright Glyph (45)
Zonitoides nitidus (Müller, 1774) Black Gloss

Locality 2

Leaf litter sample, Gettysburg (marble) Quarry, 2 mi. N.E. Dorset, Bennington Co., VERMONT. H. Lee! 11:00-11:30 AM , Sun., 10/2/05.

Total of 23 species, the four in **boldface** are new county records, of which the four indented are also new state records. Numbers **(46) (47) (48) (49)** represent additions to the cumulative Bennington Co. species count.

Cochlicopa morseana (Doherty, 1878) Appalachian Pillar
Columella simplex (Gould, 1841) Toothless Column
Gastrocopta contracta (Say, 1822) Bottleneck Snaggletooth
Gastrocopta tappaniana (C. B. Adams, 1821) White Snaggletooth
Gastrocopta pentodon (Say, 1822) Comb Snaggletooth
Vertigo gouldii (A. Binney, 1843) Variable Vertigo
***Vallonia pulchella* (Müller, 1774) Lovely Vallonia (46)**
Vallonia costata (Müller, 1774) Costate Vallonia
Punctum minutissimum (I. Lea, 1841) Small Spot
Discus catskillensis (Pilsbry, 1896) Angular Disk
***Discus whitneyi* (Newcomb, 1864) Forest Disc (47)**

Euconulus fulvus (Müller, 1774) Brown Hive
    ***Guppya sterkii* (Dall, 1888) Tiny Granule (48) --First record from New England!**
Glyphyalinia rhoadsi (Pilsbry, 1889) Sculpted Glyph
Nesovitrea binneyana (E. S. Morse, 1864) Blue Glass
    ***Glyphalina rhoadsi* (Pilsbry, 1889) Sculpted Glyph (49)**
Striatura exigua (Stimpson, 1850) Ribbed Striate
Striatura ferrea E. S. Morse, 1864 Black Striate
Zonitoides arboreus (Say, 1816) Quick Gloss
Euchemotrema fraternum (Say, 1821) Upland Pillsnail
Neohelix albolabris (Say, 1817) Whitelip
Triodopsis tridentata (Say, 1816) Northern Threetooth
Xolotrema denotatum (Férussac, 1821) Velvet Wedge

2006

Locality 1

Return to sodden low area, on stems of grasses, wildflowers and nettles, plus soil and vegetation sample, left bank of Batten Kill 1 mi. NNE Manchester Ctr., Bennington Co., Vermont. H. G. Lee! 11:15 AM to 12:15 PM, Fri., 9/15/06.

11 species:
Cochlicopa lubrica (Müller, 1774) Glossy Pillar
Carychium exiguum (Say, 1822) Obese Thorn
Columella simplex (Gould, 1841) Toothless Column
Gastrocopta tappaniana (C. B. Adams, 1821) White Snaggletooth
Vertigo elatior Sterki, 1894 Tapered Vertigo [14 specimens, all alive; only one taken on 10/05 visit]
Vertigo ovata Say, 1822 Ovate Vertigo
Punctum minutissimum (I. Lea, 1841) Small Spot
Oxyloma retusum (I. Lea, 1834) Blunt Ambersnail
Euconulus fulvus (Müller, 1774) Brown Hive
Nesovitrea electrina (Gould, 1841) Amber Glass
Zonitoides nitidus (Müller, 1774) Black Gloss

Locality 2

Leaf litter sample, Freedley (marble) Quarry, 4 mi. NNE Dorset, Bennington Co., Vermont. H. Lee! 12 noon to 1:00 PM Sat., 9/16/06.

12 species; one new county record in **boldface**. There are only three other New England county records for the Bark Snaggletooth, and number **(49)** means that this species is also an addition to the cumulative Bennington Co. species list.

Columella simplex (Gould, 1841) Toothless Column
***Gastrocopta corticaria* (Say, 1817) Bark Snaggletooth (49)**
Vertigo gouldii (A. Binney, 1843) Variable Vertigo
Vallonia costata (Müller, 1774) Costate Vallonia

Punctum minutissimum (I. Lea, 1841) Small Spot
Discus catskillensis (Pilsbry, 1896) Angular Disk
Euconulus fulvus (Müller, 1774) Brown Hive
Nesovitrea electrina (Gould, 1841) Amber Glass
Nesovitrea binneyana (E. S. Morse, 1864) Blue Glass
Striatura exigua (Stimpson, 1850) Ribbed Striate
Striatura ferrea E. S. Morse, 1864 Black Striate
Striatura milium (E. S. Morse, 1859) Fine-ribbed Striate

COMBINED OVERALL LIST FOR BENNINGTON COUNTY, VERMONT

Cumulative list of land snails collected in Bennington Co., Vermont. The last update was reported *in Shell-O-Gram* 45(5), Sept.-Dec., 2004. The current tally includes seven addenda resulting from the 10/2/05 and 9/15/06 collections and which are marked with asterisks. There is one deletion: *Vertigo pygmaea*, which was previously considered a new county record.

49 species; 22 new county records in boldface, of which 9 are new state records (indented) as compared with the list from Hubricht (1985).

***Carychium exile* H. C. Lea, 1842 Ice Thorn**
Carychium exiguum (Say, 1822) Obese Thorn
Cochlicopa lubrica (Müller, 1774) Glossy Pillar
    ***Cochlicopa morseana* (Doherty, 1878) Appalachian Pillar**
    ***Columella simplex* (Gould, 1841) Toothless Column**
Gastrocopta armifera (Say, 1821) Armed Snaggletooth
Gastrocopta contracta (Say, 1822) Bottleneck Snaggletooth
Gastrocopta corticaria* (Say, 1817) Bark Snaggletooth
Gastrocopta pentodon (Say, 1822) Comb Snaggletooth
    ***Gastrocopta tappaniana* (C. B. Adams, 1821) White Snaggletooth ***
Pupoides albilabris (C. B. Adams, 1841) White-lip Dagger
    Vertigo elatior* Sterki, 1894 Tapered Vertigo
    ***Vertigo gouldii* (A. Binney, 1843) Variable Vertigo**
Vertigo ovata Say, 1822 Ovate Vertigo
***Vertigo ventricosa* (E. S. Morse, 1865) Five-tooth Vertigo**
    ***Vallonia costata* (Müller, 1774) Costate Vallonia**
***Vallonia excentrica* Sterki, 1893 Iroquois Vallonia**
    ***Vallonia pulchella* (Müller, 1774) Lovely Vallonia ***
Haplotrema concavum (Say, 1821) Gray-foot Lancetooth
Punctum minutissimum (I. Lea, 1841) Small Spot
Helicodiscus parallelus (Say, 1817) Compound Coil
***Helicodiscus shimeki* Hubricht, 1962 Temperate Coil**
Anguispira alternata (Say, 1816) Flamed Tigersnail
Discus catskillensis (Pilsbry, 1896) Angular Disk
***Discus whitneyi* (Newcomb, 1864) Forest Disc ***
Catinella vermeta (Say, 1829) Suboval Ambersnail
***Novisuccinea ovalis* (Say, 1817) Oval Ambersnail**

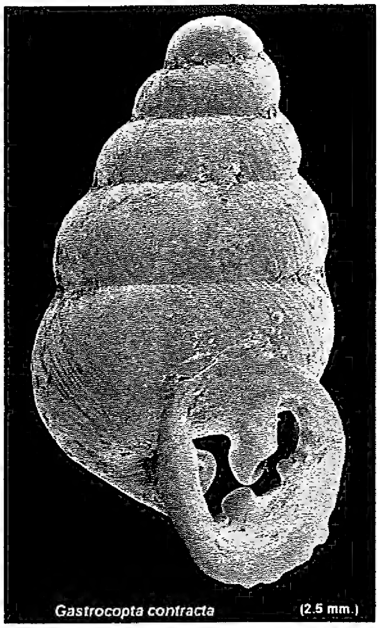
Oxyloma retusum (I. Lea, 1834) Blunt Ambersnail
Euconulus fulvus (Müller, 1774) Brown Hive
Guppya sterkii (Dall, 1888) Tiny Granule; first record from New England !
Glyphyalinia indentata (Say, 1823) Carved Glyph
Glyphyalinia rhoadsi (Pilsbry, 1889) Sculpted Glyph *
Glyphalina wheatlyi (Bland, 1883) Bright Glyph *
Hawaiia minuscula (A. Binney, 1841) Minute Gem
Mesomphix cupreus (Rafinesque, 1831) Copper Button
Mesomphix inornatus (Say, 1821) Plain Button
Nesovitrea binneyana (E. S. Morse, 1864) Blue Glass
Nesovitrea electrina (Gould, 1841) Amber Glass
Paravitrea multidentata (A. Binney, 1840) Dentate Supercoil
Striatura exigua (Stimpson, 1850) Ribbed Striate
Striatura ferrea E. S. Morse, 1864 Black Striate
Striatura milium (E. S. Morse, 1859) Fine-ribbed Striate
Zonitoides arboreus (Say, 1816) Quick Gloss
Zonitoides nitidus (Müller, 1774) Black Gloss
Vitrina angelicae Beck, 1837 Eastern Glass-snail
Appalachina sayana (Pilsbry, 1906) Spike-lip Crater
Euchemotrema fraternum (Say, 1821) Upland Pillsnail
Neohelix albolabris (Say, 1817) Whitelip
Triodopsis tridentata (Say, 1816) Northern Threetooth
Xolotrema denotatum (Férussac, 1821) Velvet Wedge

As noted in the January-February *2004 Shell-O-Gram* report, the only other Vermont county with a substantial number of recorded land snail occurrences is nearby Windsor County, which has a relatively paltry 20 species (Hubricht, 1985). Would an energetic and thorough collector be able to demonstrate that the difference between these neighboring jurisdictions is due to nothing more than lack of field work? Probably so, but it's also possible that there's an especially favorable set of conditions for the snails which inhabit this corner of the state. Perhaps someday we'll discover which answer is correct.

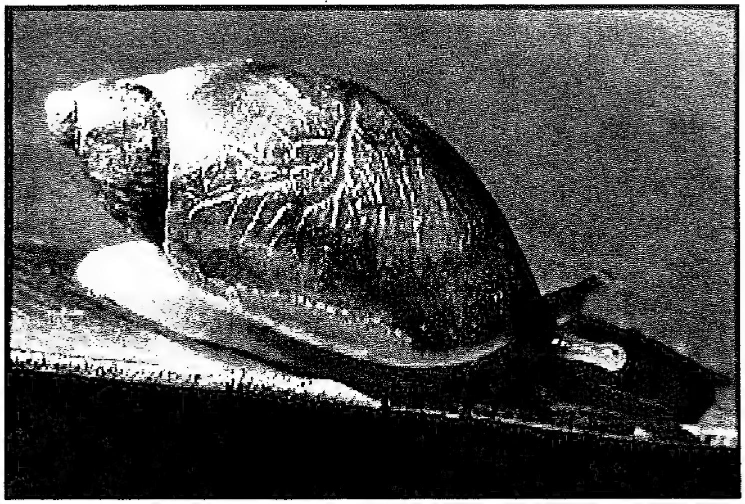
Hubricht, L., 1985. The distributions of the native land mollusks of the Eastern United States. *Fieldiana* 24(1359): 1-191 + viii. June 28.

Epilogue: A version, including photographs and scanning electron micrographs of this report appears at http://www.jaxshells.org/vermonto7.htm>. Also, chronicle of the 2007 visit to 'The Homestead' is posted http://jaxshells.org/vermont07.htm> and will appear in a soon-to-be published issue of *Shell-O-Gram.*

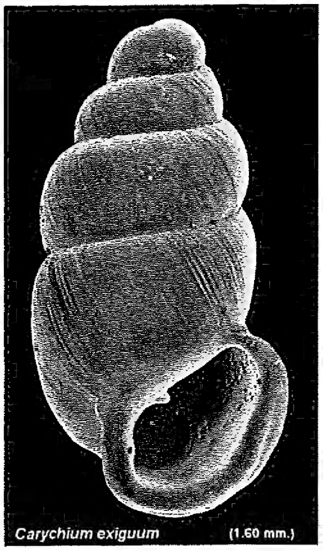
Some Vermont land snail images



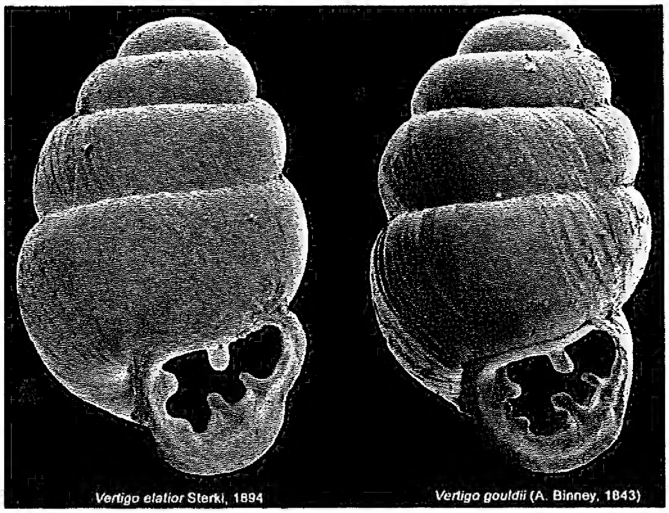
Gastrocopta contracta (2.5mm)



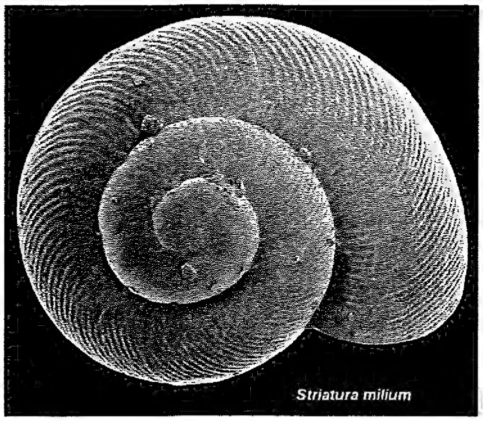
Oxyloma retusum



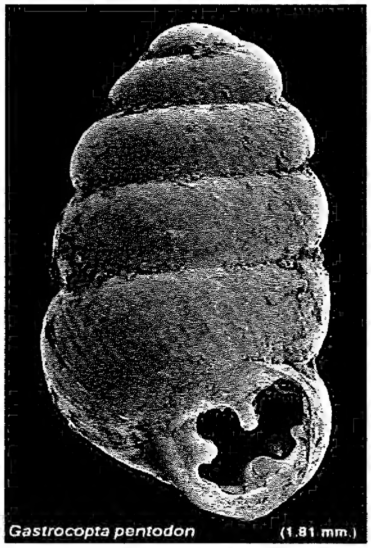
Carychium exiguum (1.60 mm)



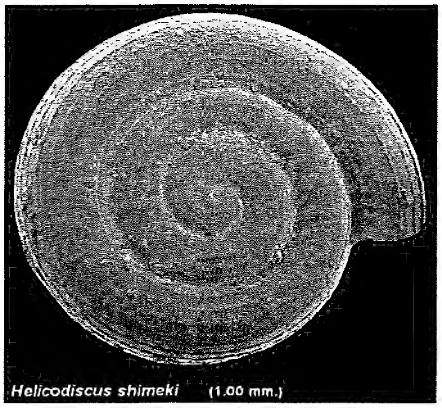
Vertigo elatior Sterki, 1894 Vertigo gouldii (A. Binney, 1843)



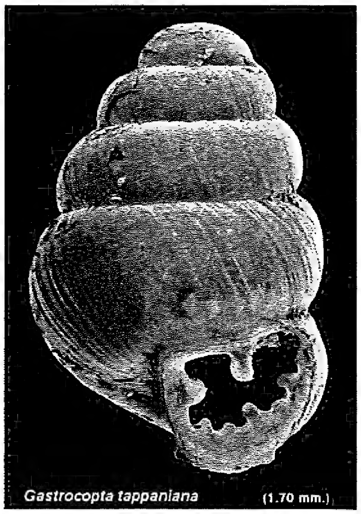
Striatura milium



Gastrocopta pentodon (1.81 mm)



Helicodiscus shimeki (1.00 mm)



Gastrocopta tappaniana (1.70mm)

A field trip to Cuddebackville

by Charles Whitman

On 5/13/06 a small and dedicated band of NYSC members undertook the first of what I hope will be an ongoing series of field trips to areas around the New York City area, not only to have a good time, but also to provide in some cases new, and in other cases updated, information on the status of mollusks (land, freshwater, and marine). As I have told some of my fellow NYSC friends, I am feeling a bit the shell club bureaucrat, and have been itching to get into the field to muck about and learn from those who are far more expert than me.

This first outing was to the Nature Conservancy site on the Neversink River near Cuddebackville, New York. It originated after a talk by George Schuler last year to the NYSC. He is the Director of the Neversink River Program and spoke to us on a project where the Nature Conservancy coordinated an effort to remove a dam on the Neversink River to restore its natural flow and with it allow local floral and fauna to flourish. The presence of one of the largest dwarf wedgemussel populations in the U.S in this portion of the river (it is a highly endangered species) was one of the primary catalysts in obtaining approval of the project. This was the first project of its type in New York State and although similar projects have been undertaken in other states and could provide a roadmap, it suffered from all the familiar teething problems of a first-time effort. After all when you get the Army Corps of Engineers, state officials, county officials, town officials, and local land owners involved, to name a few, you can just visualize the complexities.

Now that the project is finished, I felt it would be fun to visit it, and at the same time pair it with an effort to conduct a land snail and freshwater gastropod survey on the Conservancy land and adjoining state holdings.

George was kind enough to lead us to the dam removal site on the Neversink River. He explained that after removing the dam on the main portion of the river, work was also done create the correct topography, so that pools and areas could be created that would serve as habitat for mussels, fish, and other marine species. The idea was to jump-start the process of helping the river return to its original state, and that over the years the seasonal storms and other events would do the rest. As it turns out, a "100-year storm" occured last year, flooding the banks of the river and scouring the area.

Many years of change were compressed into one event with far ranging effect. The post-event surveys showed the densest populations of the more common of the 7 mussel species in the river had been driven down the river to the Port Jervis area , a good 10 miles or more away. Surveys this year will establish with greater precision what happened. To put it in perspective, the U.S. is home to 70% of all the mussel species on the planet and many if not all find their habitat under attack. The dwarf wedgemussel is viewed as somewhat of "a canary in the coal mine" which explains the interest of conservationists in protecting its habitat and trying to extend its local range, especially since the Neversink River is considered one of the premier trout streams in the Catskills, with water that is typically "gin" clear.

From the site George directed us to Basha Kill State Park. The area had never been surveyed for aquatic gastropods or land snails. With a heavy rainfall the prior day and valleys shrouded in fog the morning of visit, we hoped the weather would set the stage for momentous day of snailing. The scenery is idyllic with deep wooded areas, fast flowing streams, ponds, and even some wetlands in the mountain valleys.

Marla Coppolino was kind enough to chronicle our outing, and the results of the survey, in the following article:

New York Shell Club Trip on **May 13, 2006,** Land and freshwater snails at Cuddebackville, New York

by Marla Coppolino

On Saturday, May 13th, 2006, four members of the New York Shell Club took a field trip to Cuddebackville, New York (north of Port Jervis and west of Middletown) to survey and collect land and freshwater snails. The members were Charles Whitman, Milton "Mike" Werner, Romuald Czepulkowski and Marla Coppolino. The group traveled by car, with grateful thanks to the tireless driving efforts of Charles Whitman.

Upon our arrival, the day began with an introduction by George Schuler, the Delaware River Program Director of the Nature Conservancy, who gave us an overview of the 550 acres of land defined as the Neversink River Preserve in Cuddebackville, NY. The area consists of both low lying wetlands areas as well as some hills of the Catskill Mountains. There have been many wildlife monitoring projects on the Preserve, including those tracking populations and numbers of owls and other birds, dragonflies and the endangered dwarf wedgemussel, *Alasmidonta heterodon* (Lea, 1830). The freshwater mussel (Unionidae) projects have tracked their recent populations in the Neversink River, particularly in an area that has been affected by the recent removal of a dam. Despite all the active interest in various faunal surveys, our field survey of land and freshwater snails represents the first of this area, according to Schuler.

We visited four sites around the Preserve. At our first site, along the banks and surrounding woods of the Basha Kill, we found no land snails, but did find two species of slugs, and then several good freshwater finds at the edges of the Kill itself. Collected there were two specimens of *Succinea retu*sa Lea, 1834, actually a pulmonate but a rather amphibious one, although the species identification is questionable and will be later verified. Also found were two *Cipangopaludina chinensis* (Reeve, 1863), one *Physella* species, about ten Hydrobiidae species, and one juvenile *Helicoma* species. The exact identifications will be determined by comparison to specimens in the AMNH collections, and by examination of the radulae by Marla Coppolino.

Our second site was on the northwest side of Basha Kill, and at higher elevation, though it yielded only slightly better luck for us in land snail collecting. One live specimen and one dead shell of *Stenotrema fraternum* (Say, 1824) and one dead *Zonitoides arboreus* (Say, 1817) shell were all that were found in a lightly wooded area on the slope of a low mountain.

As for non-molluscan species, we observed redback salamanders (*Plethodon cinereus*), several species of millipedes (class Diplopoda) and centipedes (class Chilopoda) and brilliant red velvet mites (*Trombidium* spp.). Piliated woodpeckers (*Dryocopus pileatus*) could be heard pecking in the trees, while a cacophony of chorus, bull and spring peeper frogs played on near the water. The eastern tent moth caterpillars (*Malacosoma americanum*) were actively engaged in their tree defoliation mission. Amongst the unwelcomed critters were ticks (luckily we were very tick-proofed, but they tried anyway) and swarms of gnats that aimed their flight paths for human eyeballs. The perils of the plant kingdom also loomed, with poison ivy thriving rampantly over the forest floor.

Despite the mild (around 65°F), humid, near perfect land-snailing weather that day, other factors were thought to be responsible for the low snail numbers. Only a year ago, in 2005, the area experienced a major flood, at the magnitude of being known as a "100 year flood". Water-swept debris from the overflowed Neversink River could still be seen wrapped around the trunks and branches of some trees, indicating the damage was extensive and most likely devastating to the populations of land snails. Thus there is all the more reason to monitor the land snail populations, and keep good records, so we will know what is living there before these natural disasters strike.

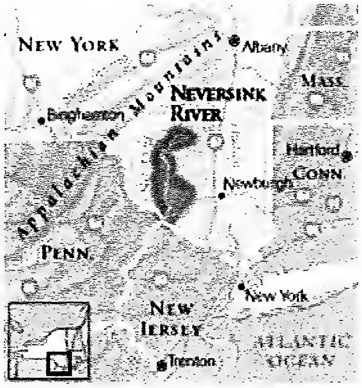
Additionally, most of New York State has suffered a rainfall shortage this spring. Even though there had been heavy rains in the area for two days prior to our trip, the ground hadn't been consistently saturated in recent weeks to support the land snails' normal springtime activities -- eating and mating.

The last two sites, both near creeks, yielded only one other snail: a *Pseudosuccinea* species, on a branch in a quickly moving stream. Romuald collected bags of leaf litter at both sites, and we eagerly await his findings from these.

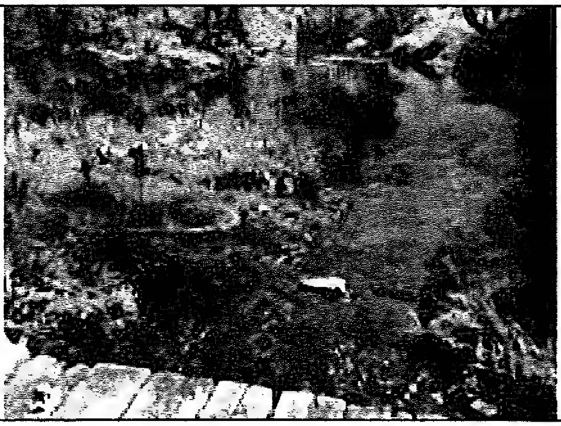
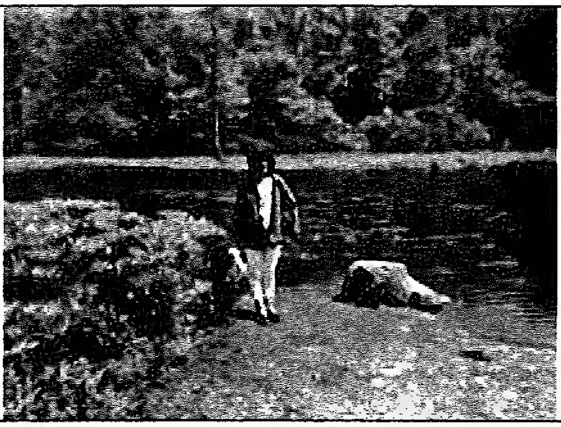
This trip represents what we hope to be the first of an annual land snail survey event, with the areas to be re-visited and evaluated for terrestrial Mollusca for years to come. In all, it was a not only a fun trip, but also one that should stand as an example of why we need more people to support and participate in the land snail surveys.

Websites for the Neversink Preserve:
http://www.nature.org/wherewework/northamerica/states/newyork/preserves/art12204.html

http://www.nature.org/wherewework/fieldguide/projectprofiles/nsr.html



The Neversink River in New York

	
Basha Kill, Cuddebackville, NY	Stream near the Neversink River Preserve
	
Charlie, Romuald and Mike searching for critters at Basha Kill	Marla at Basha Kill, well-layered and tick proofed

The following page is a species list with notes for three localities on the May 13, 2006 trip to Cuddebackville, New York, elevation 500-1000 ft, with Charles Whitman, Romuald Czepulkowski, Mike Werner and Marla Coppolino

SITE 1: Basha Kill (West Brookville)
1:30 - 2:45 pm, partly cloudy, day after rainfall, 60 F

Deroceras ?reticulatum (Müller 1774)
n=1, under bark, !M. Coppolino

Unidentified slugs
n=2, one large, on ground, one small under bark, !R. Czepulkowski and M. Coppolino

?*Succinea* or ?*Oxyloma retusa* (Lea, 1834)
n=2, on debris at water's edge, !R. Czepulkowski

Cipangopaludina chinensis (Reeve, 1863)
n=2, in water, at mud bottom, !C. Whitman

Physella sp.
n=1, on log submerged in water, !R. Czepulkowski

Hydrobiidae sp.
n=?, on log submerged in water, !M. Coppolino

Helicoma juvenile
n=1, on log submerged in water, !R. Czepulkowski

SITE 2: North-west side Basha Kill, Lightly wooded area off South Road
3:00 - 4:00 pm, partly cloudy, 65 F

Stenotrema fraternum (Say, 1824)
n=2, side of hill, base of tree, under rock and leaf litter, one alive, one juvenile dead shell, !M. Coppolino

Zonitoides arboreus (Say, 1817)
n=1, dead shell, under bark, !R. Czepulkowski

SITE 3: Nature Conservency Center, Neversink River Preserve, Trail to creek
4:00 - 5:00 pm, partly sunny, 68 F

Stenotrema fraternum (Say, 1824)
n=1, long time dead shell under board, !R. Czepulkowski

Pseudosuccinea sp.
n=1, on branch in quick-moving stream, !R. Czepulkowski

Zonitoides arboreus (Say, 1817)
n=1 !R. Czepulkowski

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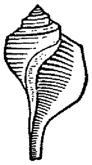

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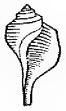

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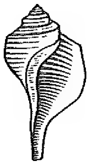

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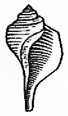

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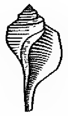

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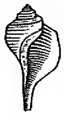

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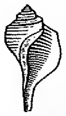

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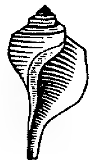

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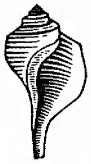

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Dorothy Raeihle, Editor

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